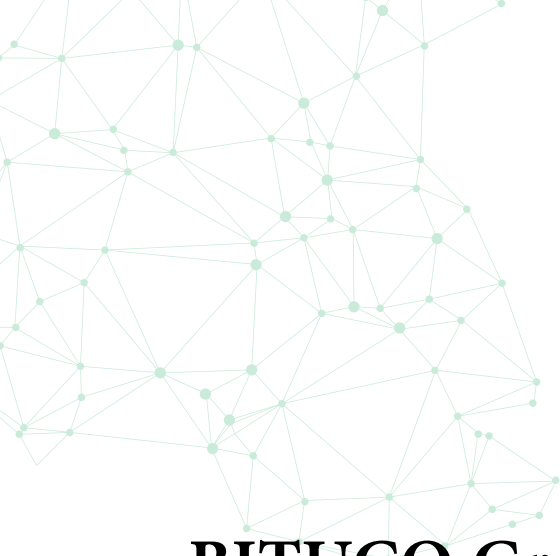


An abstract graphic in the top left corner consisting of a network of green dots connected by thin green lines, forming a complex, interconnected web.

BITUCO Group

Technical Data

All about grades, specification, and uses of bitumen

A large abstract graphic in the bottom right corner, similar to the one in the top left, featuring a network of green dots connected by thin green lines, creating a complex, interconnected web.

About BITUCO Group

BITUCO

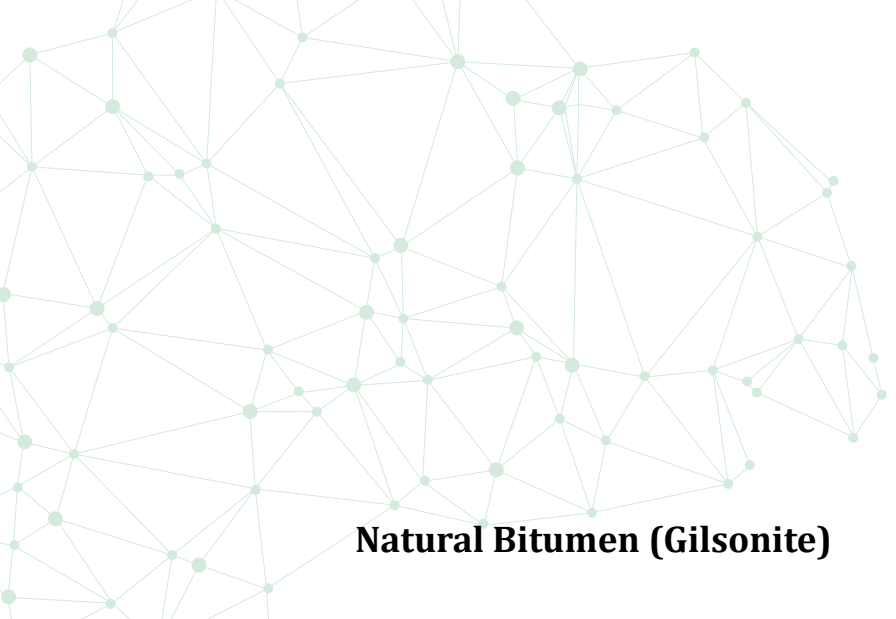
BITUCO group offer wide range of products including Anionic & Cationic.

Bitumen Emulsion, Cutback, special primer and mortar, Cleaner of Sedimentation and chemical additives for building industry.

BITUCO has several Factory in Oman, Iran and Georgia with a history more than 10 years with a Conduct business in 40 countries on every continent throughout the word. The first factory established in 2004 as ESD (WWW.esd.ir) who has well equipped Manufacturing facility with developed laboratory located in SEZ in Iran. The Products are classified as the following:

- Bitumen Cutback (e.g. MC-30MC-70MC3000).
- Bitumen Emulsion in Anionic & Cationic type (e.g. K60-1/ K70-1/ K70-1/SS1-h/CSS1).
- Solvent and water base primers. (e.g. D41).
- Bitumen MASTIC & Waterproof (Rubberized bitumen Emulsion).
- Mulch Treatment & industrial Coating.
- Organic cleaner of sedimentation which made in bitumen storage tank and pipes.

Products offer in balk or in new barrel (220-20 liters) with different thickness (1-0.6 MM) and selectable colors by buyers, palletized. All cargo controls by International inspection companies (SGS or Geochem).



Natural Bitumen (Gilsonite)

What is Gilsonite.....10

- Mesh 40-30, Ash 10%12
- Mesh 200, Ash 10-5%13
- Mesh 200, Ash 10%14
- Mesh 200, Ash 15%14
- Mesh 200, Ash 24%15
- Safety information for Gilsonite bitumen16
- Uses of Gilsonite16
- Directions for use17

Bitumen Penetration Grade.....18-19

- 10-2020
- 20-3020
- 35-5021
- 40-5021
- 50-7022
- 60-7022
- 60-8023

- 70-10023
- 85-10024
- 90-13024
- 100-12025
- 120-15025
- 150-20026
- 200-30026
- Bitumen Usage27

Bitumen AH.....28-29

- AH-5030
- AH-7031
- AH-9032

Bitumen Viscosity Grade.....34-35

- VG-1036
- VG-2036
- VG-3037
- VG-4037
- AC-2.538
- AC-538
- AC-1039
- AC-2039
- AC-3040
- AC-4040
- AR-100041
- AR-200041
- AR-400042
- AR-800042
- AR-1600043

Rubbery Bitumen (Oxidized Bitumen)..44-45

• 75-25.....	46
• 85-25.....	46
• 90-10.....	47
• 90-15.....	47
• 90-40.....	48
• 95-15.....	48
• 95-25.....	49
• 115-15.....	49
• 125-10.....	50
• 150-5.....	50
USES of OXIDIZED BITUMEN.....	51

Performance Grade (PG) Bitumen.....52-53

• PG70-10.....	54
• PG70-16.....	54
• PG70-22.....	55
• PG70-28.....	55
• PG-70-34.....	56
• PG70-40.....	56
• PG76-10.....	57
• PG76-16.....	57
• PG76-22.....	58
• PG76-28.....	58
• PG76-34.....	59
• PG82-10.....	59
• PG82-16.....	60
• PG82-22.....	60
• PG82-28.....	61
• PG82-34.....	61

Usage.....	62
------------	----

Cutback Bitumen..... 64

Physical and chemical characteristics of the product.....	66
---	----

Rapid curing cutback bitumen (RC).....67

• RC 70.....	68
• RC 250.....	69
• RC 800.....	70
• RC 3000.....	71

Medium curing cutback bitumen (MC).....72

• MC 30.....	74
• MC 70.....	75
• MC250.....	76
• MC 800.....	77
• MC3000.....	78

Slow curing cutback bitumen (SC).....80

Cutback bitumen slow curing (SC).....	81
• SC 70.....	82
• SC 250.....	82
• SC 800.....	83
• SC 3000.....	83
Special Primer.....	84
• Solvent Based Primer D-40.....	85
• Solvent Based Primer D-41.....	85
General application cutback bitumen.....	86
Safety information for cutback bitumen.....	87
Usage guide.....	87

General information.....	87
Toxicology information	88
Warning.....	88
Danger of fire.....	89
Sustainability.....	89
Storage and transportation.....	89

Bitumen Emulsion 90

Physical and chemical characteristics of the product	91
--	----

Anionic Bitumen Emulsion 92

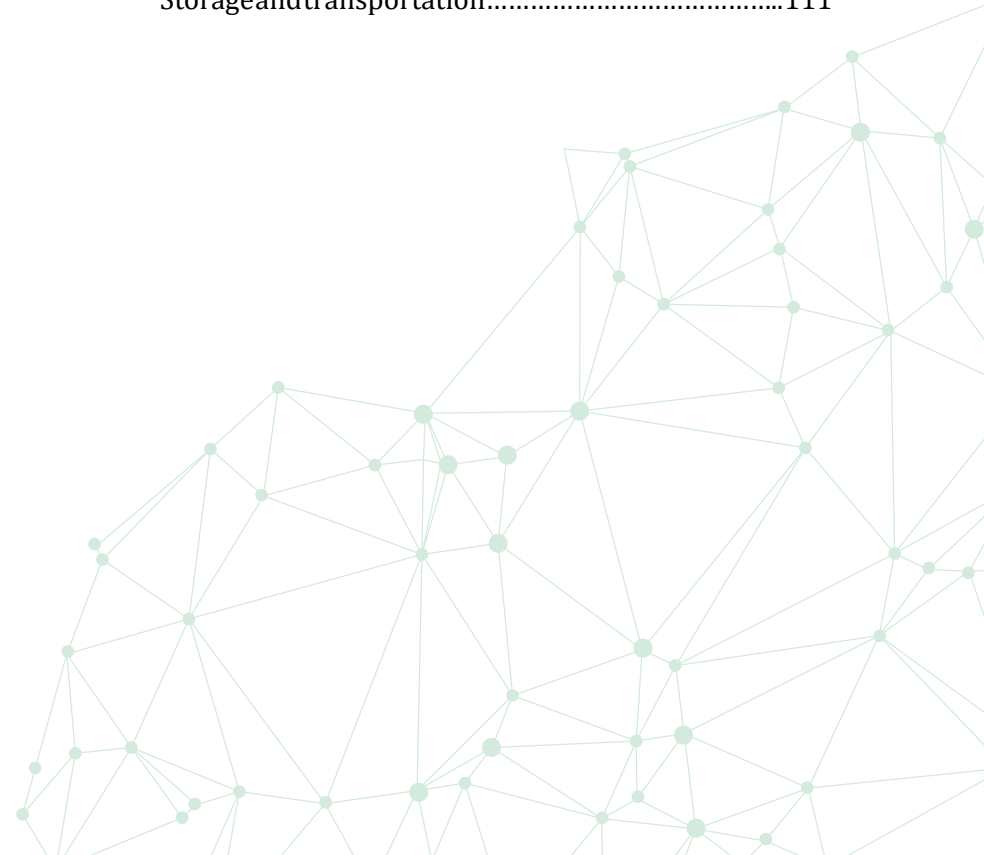
Anionic Emulsion.....	93
• RS- 1	94
• RS- 2	95
• HFRS- 2	96
• MS- 1	97
• MS- 2	98
• MS- 2h	98
• HFMS- 1	99
• HFMS- 2	99
• HFMS- 2h.....	100
• HFMS- 2s.....	100
• SS- 1	101
• SS- 1h.....	101

Cationic Bitumen Emulsion.....102

Cationic Emulsion.....	103
• CRS- 1	104
• CRS- 2	104
• CMS- 2	105

• CMS- 2h.....	105
• K60- 1	108
• K70- 1	106
• CSS- 1	107
• CSS- 1h.....	107
Special Primer.....	108
• Water Based Primer Type I	109
• Water Based Primer Type II	109

Safety information for emulsion bitumen.....	110
Usage guide.....	110
General information.....	110
Sustainability.....	111
Safety.....	111
Storage and transportation.....	111



What is Gilsonite?



BITUCO

When crude oil has grown and transported to the earth's surface over millions of years and appeared as crystals near the upper surface of the earth due to pressure and temperature factors and also the time of volatiles. This name was due to this fact that the first person who discover this product and sell it commercially in the market was Gilson (Samuel Gilson), who after registering this brand, led the American company Gilsonite, and today the whole world knows this product by his name.

This valuable product contains more than 100 elements and can be combined and homogenized with 160 other materials and its soft temperature is between 148 to 240 degrees Celsius and its permeability is up to 0.4 millimeters.

Physical characteristics

Resistance to	Softening point(°C)	State of	Color	Water solubility
acids - bases and salts	170-225	Solid	black	Insoluble

▶ Mesh 30-40, Ash 10%

No	Test	Result	Test Method
1	Ash Content, wt%	10	ASTM-D3174
2	Moisture Content, wt%	3	ASTM-D3173
3	Volatile Matter, wt%	64	ASTM-D3175
4	Solubility in CS ₂ , wt%	70	ASTM-D4
5	Specific Gravity@25 °C	1	ASTM-D3289
6	Color in mass	Black	-----
7	Color in streak or powder	Black	-----
8	Softening Point, °C	180	ASTM-D36
9	penetration@25 °C, 10-1 mm	0	ASTM-D5
Element Analysis			
1	Carbon, wt%	90	ASTM-D5291
2	Hydrogen, wt%	7.1	ASTM-D5291
3	Nitrogen, wt%	3.67	ASTM-D5291
4	Oxygen, wt%	3.1	ASTM-D5291
5	Sulphur, wt%	3	Leco(s)Analyzer

▶ Mesh 200, Ash 5-10%

No	Test	Result	Test Method
1	Ash Content, wt%	8.9	ASTM-D3174
2	Moisture Content, wt%	≤5	ASTM-D3173
3	Volatile Matter, wt%	58	ASTM-D3175
4	Fixed Carbon, wt%	36	ASTM-D3172
5	Solubility in CS ₂ , wt%	86	ASTM-D4
6	Specific Gravity@25 °C	1.06	ASTM-D3289
7	Normal Heptane Insoluble, wt%	77	ASTM-D3279
8	Color in mass	Black	-----
9	Color in streak or powder	Brown	-----
10	Softening Point, °C	185	ASTM-D36
11	penetration@25 °C, 10-1 mm	0	ASTM-D5
Element Analysis			
1	Carbon, wt%	79	ASTM-D5291
2	Hydrogen, wt%	6.3	ASTM-D5291
3	Nitrogen, wt%	0.85	ASTM-D5291
4	Oxygen, wt%	2.6	ASTM-D5291
5	Sulphur, wt%	2	Leco(s)Analyzer

Packing

- In 25kg bags on a wooden pallet and in Jumbo bags 1 or 2 tons to choose the buyer.

Packing

- In 25kg bags on a wooden pallet and in Jumbo bags 1 or 2 tons to choose the buyer.

► Mesh 200, Ash 10%

No	Test	Result	Test Method
1	Ash Content, wt%	10	ASTM-D3174
2	Moisture Content, wt%	0.5	ASTM-D3173
3	Solubility in CS ₂ , wt%	85	ASTM-D4
4	Density (Spec. grav.)	0.98	-----
5	Softening Point, °C	170-225	ASTM-D36
Element Analysis			
1	Carbon, wt%	84	ASTM-D5291
2	Hydrogen, wt%	3.15	ASTM-D5291
3	Nitrogen, wt%	0.45	ASTM-D5291
4	Oxygen, wt%	1	ASTM-D5291
5	Sulphur, wt%	2.5	Leco(s)Analyzer

► Mesh 200, Ash 15%

No	Test	Result	Test Method
1	Ash Content, wt%	15	ASTM-D3174
2	Moisture Content, wt%	3	ASTM-D3173
3	Volatile Matter, wt%	64	ASTM-D3175
4	Solubility in CS ₂ , wt%	70	ASTM-D4
5	Specific Gravity@25 °C	1	ASTM-D3289
6	Color in mass	Black	-----
7	Color in streak or powder	Black	-----
8	Softening Point, °C	180	ASTM-D36
9	penetration@25 °C, 10-1 mm	0	ASTM-D5
Element Analysis			
1	Carbon, wt%	90	ASTM-D5291
2	Hydrogen, wt%	7.1	ASTM-D5291
3	Nitrogen, wt%	3.67	ASTM-D5291
4	Oxygen, wt%	3.1	ASTM-D5291
5	Sulphur, wt%	3	Leco(s)Analyzer

Packing

- In 25kg bags on a wooden pallet and in Jumbo bags 1 or 2 tons to choose the buyer.

► Mesh 200, Ash 24%

No	Test	Result	Test Method
1	Ash Content, wt%	24	ASTM-D3174
2	Moisture Content, wt%	≤5	ASTM-D3173
3	Volatile Matter, wt%	56	ASTM-D3175
4	Fixed Carbon, wt%	26	ASTM-D3172
5	Solubility in CS ₂ , wt%	76	ASTM-D4
6	Specific Gravity@25 °C	1.03	ASTM-D3289
7	Normal Heptanes Insoluble, wt%	86	ASTM-D3279
8	Color in mass	Black	-----
9	Color in streak or powder	Brown	-----
10	Softening Point, °C	200	ASTM-D36
11	penetration@25 °C, 10-1 mm	0	ASTM-D5
Element Analysis			
1	Carbon, wt%	78	ASTM-D5291
2	Hydrogen, wt%	6.1	ASTM-D5291
3	Nitrogen, wt%	0.75	ASTM-D5291
4	Oxygen, wt%	2.8	ASTM-D5291
5	Sulphur, wt%	3	Leco(s)Analyzer

Packing

- In 25kg bags on a wooden pallet and in Jumbo bags 1 or 2 tons to choose the buyer.



Safety information for Gilsonite bitumen

Uses of Gilsonite

- In the production of isogum and asphalt
- Preparation of paints and inks
- Isolation
- Preparation of emulsion bitumen
- Coke production
- Used in drilling mud
- Used for fuel
- Use of Gilsonite in the foundry industry
- Use of Gilsonite in the chemical industry



Directions for use

- Before the Gilsonite is added, the bitumen is heated and then the Gilsonite is mixed with it.
- Gilsonite can be added as a free or dry stream or solid granules. Also in the face Weighed by melting plastic bags or in bulk or by rotating feeders Add. In the most important method, Gilsonite is added directly to the refinery bitumen tank. 170 and there is a constant rotational motion to create uniformity throughout the tank and Gilsonite is also added from the top of the tank.
- Gilsonite mixes easily with compounds is compatible with hot appliances and does not require specialized equipment in the operation of adding it.



Penetration Bitumen

Bitumen Penetration Grade

1. A black viscous mixture of hydrocarbons obtained naturally or as a residue from petroleum distillation. Bitumen is produced from the vacuum distillation of crude oil and is classified according to its penetration range. This type of bitumen used for road surface.

2. Bitumen is a black to dark brown hydrocarbon that dissolves completely in carbon sulfide and carbon tetrachloride. Bitumen is solid at ambient temperature. But as the temperature rises, it becomes a paste and then liquefies. The main applications of bitumen are due to the existence of two important properties of this material:

- Water impermeability;
- Adhesion

▶ Bitumen 10/20

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1050	ASTM D70
penetration @25°C	10	20	ASTM D5
Softening point, °C	65	75	ASTM D36
Viscosity @135°C, cst	500	1000	ASTM D2170
Ductility @ 25°C	5	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.5	ASTM D6

▶ Bitumen 35/50

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	35	50	ASTM D5
Softening point, °C	55	63	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 20/30

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1050	ASTM D70
penetration @25°C	20	30	ASTM D5
Softening point, °C	55	63	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

▶ Bitumen 40/50

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	40	50	ASTM D5
Softening point, °C	52	60	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

▶ Bitumen 50/70

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	50	70	ASTM D5
Softening point, °C	46	56	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 60/80

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	60	80	ASTM D5
Softening point, °C	46	-	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 60/70

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	60	70	ASTM D5
Softening point, °C	49	56	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 70/100

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	70	100	ASTM D5
Softening point, °C	45	52	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

▶ Bitumen 85/100

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	85	100	ASTM D5
Softening point, °C	42	-	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 100/120

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	100	120	ASTM D5
Softening point, °C	42	49	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 90/130

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	90	130	ASTM D5
Softening point, °C	43	47	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	218	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 120/150

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	120	150	ASTM D5
Softening point, °C	38	-	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	218	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

▶ Bitumen 150/200

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	150	200	ASTM D5
Softening point, °C	36	-	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	218	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.5	ASTM D6
Drop in Penetration%	-	20	ASTM D6-D5

▶ Bitumen 200/300

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1010	1060	ASTM D70
penetration @25°C	200	300	ASTM D5
Softening point, °C	32	-	ASTM D36
Ductility @ 25°C	100	-	ASTM D113
Flash point, °C	177	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene,	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	1.0	ASTM D6
Retained Penetration after%	37	-	ASTM D6-D5

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

▶▶▶ Bitumen Usage

Bitumen is widely used in the construction of asphalt roads and bituminous membrane products. Bitumen is commonly used to build highways, motorways and rail networks. Bitumen has excellent water-proofing properties and is widely used for making roofing products along with a range of other household and industrial applications, from emulsion paints to sound-proofing. Penetration Bitumen and Bitumen Emulsions are used for the construction of railway tracks and by using special types of bitumen such as Polymer Modified Bitumen, the vibration and noise levels are reduced due to a dampening effect. Bitumen has been proven to be effective on both high-speed railway tracks and heavy load railway tracks. Bitumen is also used for surfacing airfield runways and air strips (PMB is preferred due to its fuel resistant properties) and taxi ways. For the Marine construction industry bitumen is used for hydraulic applications such as canal lining, underwater tunnels, river bank protection, dam construction and sea defenses. There are also numerous industrial applications like roofing felt material, printing inks, packaging paper, linoleum, electrical cable / Junction box insulation, mastic for roofing of terraces, and duplex paper manufacture. Bitumen Suppliers Limited can meet all your individual requirements.

Bitumen AH

Bitumen AH

Bitumen AH is bitumen of penetration grade that are designed according to Chinese standards and are used in the road construction industry.

► AH- 50

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@15°C	report		ASTM D70
Density@25°C	report		ASTM D70
penetration @25°C	40	60	ASTM D5
Penetration index: PI	-1.5	+1.0	EN 12591 Annex A
Softening point, °C	49	-	ASTM D36
Kinematic Viscosity @60°C pa.s	200	-	ASTM D2171
Ductility @ 10°C	15	-	ASTM D113
Ductility @ 15°C	100	-	ASTM D113
Flash point, °C	260	-	ASTM D92
Solubility in trichloroethylene, %	99.5	-	ASTM D2042
Wax content,%	-	2.2	DIN 52015
Test on residue After RTFO			
Change of Mass WT%	±0.8		ASTM D4402
Penetration ratio 25°C %	63	-	ASTM D5
Ductility @ 10°C	4	-	ASTM D113

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AH- 70

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@15°C	report		ASTM D70
Density@25°C	report		ASTM D70
penetration @25°C	60	80	ASTM D5
Penetration index: PI	-1.5	+1.0	EN 12591 Annex A
Softening point, °C	46	-	ASTM D36
Kinematic Viscosity @60°C pa.s	180	-	ASTM D2171
Ductility @ 10°C	20	-	ASTM D113
Ductility @ 15°C	100	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.5	-	ASTM D2042
Wax content,%	-	2.2	DIN 52015
Test on residue After RTFO			
Change of Mass WT%	±0.8		ASTM D4402
Penetration ratio 25°C %	61	-	ASTM D5
Ductility @ 10°C	6	-	ASTM D113

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AH- 90

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@15°C	report		ASTM D70
Density@25°C	report		ASTM D70
penetration @25°C	80	100	ASTM D5
Penetration index: PI	-1.5	+1.0	EN 12591 Annex A
Softening point, °C	44	-	ASTM D36
Kinematic Viscosity @60°C pa.s	140	-	ASTM D2171
Ductility @ 10°C	45	-	ASTM D113
Ductility @ 15°C	100	-	ASTM D113
Flash point, °C	245	-	ASTM D92
Solubility in trichloroethylene, %	99.5	-	ASTM D2042
Wax content,%	-	2.2	DIN 52015
Test on residue After RTFO			
Change of Mass WT%	±0.8		ASTM D4402
Penetration ratio 25°C %	57	-	ASTM D5
Ductility @ 10°C	8	-	ASTM D113

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).



Viscosity Grade Bitumen

Viscosity Grade Bitumen

Viscosity Grade Bitumen (Asphalt) is a standard grade Bitumen usually used as a Paving Grade Bitumen suitable for road construction and for the production of asphalt pavements with superior properties. This grade of Bitumen is mainly used in the manufacture of hot mix asphalt for bases and wearing courses, and possesses characteristics and qualities unique and quite different from other agents. They achieve very flexible and tenacious connections with other materials due mainly to viscoelastic response of bitumen, which behavior depends on how fast changes are applied.

► VG- 10

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Absolute viscosity @ 60 °C, P	80	-	ASTM D-2171
Kinematic viscosity@135°C, cst	250	-	ASTM D-2171
Flash point, °C	220	-	ASTM D-92
penetration @25°C	80	100	ASTM D-5
Softening point °C	40	-	ASTM D-36
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	75	-	ASTM D-113
viscosity Ratio @ 60 °C,Pa.s	-	500	ASTM D-2171

► VG- 30

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Absolute viscosity @ 60 °C, Pa.s	240	-	ASTM D-2171
Kinematic viscosity@135°C, mm2/s	350	-	ASTM D-2171
Flash point, °C	230	-	ASTM D-92
penetration @25°C	50	70	ASTM D-5
Softening point °C	47	-	ASTM D-36
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C cm	40	-	ASTM D-113
viscosity Ratio @ 60 °C Pa.s	-	1500	ASTM D-2171

► VG- 20

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Absolute viscosity @ 60 °C,Pa.s	160	-	ASTM D-2171
Kinematic viscosity@135°C, mm2/s	300	-	ASTM D-2171
Flash point, °C	230	-	ASTM D-92
penetration @25°C	60	80	ASTM D-5
Softening point °C	45	-	ASTM D-36
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	50	-	ASTM D-113
viscosity Ratio @ 60 °C,Pa.s	-	1000	ASTM D-2171

► VG- 40

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Absolute viscosity @ 60 °C, Pa.s	320	480	ASTM D-2171
Kinematic viscosity@135°C, mm2/s	400	-	ASTM D-2171
Flash point, °C	230	-	ASTM D-92
penetration @25°C	40	60	ASTM D-5
Softening point °C	50	-	ASTM D-36
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	25	-	ASTM D-113
viscosity Ratio @ 60 °C, Pa.s	-	2000	ASTM D-2171

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AC- 2.5

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	200	300	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	80	-	ASTM D-2171
Flash point , Cleveland open cup , °C	163	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	200		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	100	-	ASTM D-113
Viscosity@60°C, P	-	1250	ASTM D-2171

► AC- 5

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	400	600	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	110	-	ASTM D-2171
Flash point , Cleveland open cup , °C	177	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	120		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	100	-	ASTM D-113
Viscosity@60°C, pa.s	-	2500	ASTM D-2171

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AC- 10

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	800	1200	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	150	-	ASTM D-2171
Flash point , Cleveland open cup , °C	219	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	70		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	50	-	ASTM D-113
Viscosity@60°C, P	-	5000	ASTM D-2171

► AC- 20

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	1600	2400	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	210	-	ASTM D-2171
Flash point , Cleveland open cup , °C	232	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	40		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	20	-	ASTM D-113
Viscosity@60°C, P	-	10000	ASTM D-2171

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AC- 30

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	2400	3600	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	250	-	ASTM D-2171
Flash point , Cleveland open cup , °C	232	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	30		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	15	-	ASTM D-113
Viscosity@60°C, P	-	15000	ASTM D-2171

► AC- 40

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	3200	4800	ASTM D-2171
Kinematic viscosity@135°C, mm ² /s	300	-	ASTM D-2171
Flash point , Cleveland open cup , °C	232	-	ASTM D-92
penetration @25°C, 100g, 5sec , 0.1 mm	20		ASTM D-5
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Test on Residue from thin film oven tests			
Ductility @ 25°C,cm	10	-	ASTM D-113
Viscosity@60°C, P	-	20000	ASTM D-2171

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AR- 1000

Tests on Residue from Rolling Thin-Film Oven	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	750	1250	ASTM D-2171
Kinematic viscosity@135°C, Cts	140	-	ASTM D-2171
penetration @25°C, 100g, 5sec , 0.1 mm	65	-	ASTM D-5
penetration @25°C, 100g, 5sec , 0.1 mm	-	-	ASTM D-5
Ductility @ 25°C,cm	100	-	ASTM D-113
Test on Residue from thin film oven tests			
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Flash point , °C	205	-	ASTM D-92

► AR- 2000

Tests on Residue from Rolling Thin-Film Oven	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	1500	2500	ASTM D-2171
Kinematic viscosity@135°C, Cts	200	-	ASTM D-2171
penetration @25°C, 100g, 5sec , 0.1 mm	40	-	ASTM D-5
penetration @25°C, 100g, 5sec , 0.1 mm	40	-	ASTM D-5
Ductility @ 25°C,cm	100	-	ASTM D-113
Test on Residue from thin film oven tests			
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Flash point , °C	220	-	ASTM D-92

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AR- 4000

Tests on Residue from Rolling Thin-Film Oven	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	3000	5000	ASTM D-2171
Kinematic viscosity@135°C, Cts	275	-	ASTM D-2171
penetration @25°C, 100g, 5sec , 0.1 mm	25	-	ASTM D-5
penetration @25°C, 100g, 5sec , 0.1 mm	45	-	ASTM D-5
Ductility @ 25°C,cm	75	-	ASTM D-113
Test on Residue from thin film oven tests			
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Flash point , °C	227	-	ASTM D-92

► AR- 8000

Tests on Residue from Rolling Thin-Film Oven	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	6000	10000	ASTM D-2171
Kinematic viscosity@135°C, Cts	400	-	ASTM D-2171
penetration @25°C, 100g, 5sec , 0.1 mm	20	-	ASTM D-5
penetration @25°C, 100g, 5sec , 0.1 mm	50	-	ASTM D-5
Ductility @ 25°C,cm	75	-	ASTM D-113
Test on Residue from thin film oven tests			
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Flash point , °C	232	-	ASTM D-92

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

► AR- 16000

Tests on Residue from Rolling Thin-Film Oven	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Viscosity@60°C, P	12000	20000	ASTM D-2171
Kinematic viscosity@135°C, Cts	550	-	ASTM D-2171
penetration @25°C, 100g, 5sec , 0.1 mm	20	-	ASTM D-5
penetration @25°C, 100g, 5sec , 0.1 mm	52	-	ASTM D-5
Ductility @ 25°C,cm	75	-	ASTM D-113
Test on Residue from thin film oven tests			
Solubility in trichloroethylene, %	99.0	-	ASTM D-2042
Flash point , °C	240	-	ASTM D-92

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

OXIDIZED BITUMEN

RUBBERY BITUMEN (OXIDIZED BITUMEN)

Oxidized bitumen is blown from blowing hot air to pure bitumen at the final stage of the purification operation in this process, hot air with a temperature of 200 to 300 degrees Celsius is blown through a perforated tube into a compartment containing bitumen.

Oxidized bitumen is categorized based on softening points and penetration rate. For example, oxidized bitumen 40/85 is a type of bitumen whose softening point is 5 ± 85 degrees Centigrade and its penetration rate is $0.1) 5 \pm 40\text{mm}$). Oxidized bitumen is also expected to make up for weight loss under heat. The softening point in oxidized bitumen is much higher than in regular bitumen, causing lower thermal sensitivity.

Physical characteristics

Water solubility	Color	Reactivity	Solubility in organic solvents	Flexibility at low temperatures	Non-flow of bitumen at high temperatures
Insoluble	black	Non-Reactive	solvable	0-5 °C	Max 90 °C

► Bitumen 75/25

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@ 25°C	1.05 approx.		ASTM D70
penetration @25°C	20	30	ASTM D5
Softening point, °C	70	80	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 90/10

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	5	15	ASTM D5
Softening point, °C	85	95	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 85/25

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	20	30	ASTM D5
Softening point, °C	80	90	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 90/15

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	10	20	ASTM D5
Softening point, °C	85	95	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

Packing: Various pickings are available for customer's purpose and conveniences:

- Kraft bag
- Meltable plastic bag
- Drum
- Bulk

Packing: Various pickings are available for customer's purpose and conveniences:

- Kraft bag
- Meltable plastic bag
- Drum
- Bulk

► Bitumen 90/40

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	35	45	ASTM D5
Softening point, °C	85	95	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 95/25

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	20	30	ASTM D5
Softening point, °C	90	100	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 95/15

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	10	20	ASTM D5
Softening point, °C	90	100	ASTM D36
Ductility @ 25°C	1.5	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After RTFO			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 115/15

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	10	20	ASTM D5
Softening point, °C	110	120	ASTM D36
Ductility @ 25°C	1.5	-	ASTM D113
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After RTFO			
Change of Mass WT%	-	0.2	ASTM D6

Packing: Various pickings are available for customer's purpose and conveniences:

- Kraft bag
- Meltable plastic bag
- Drum
- Bulk

Packing: Various pickings are available for customer's purpose and conveniences:

- Kraft bag
- Meltable plastic bag
- Drum
- Bulk

► Bitumen 125/10

BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	7	12	ASTM D5
Softening point, °C	120	130	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

► Bitumen 150/5

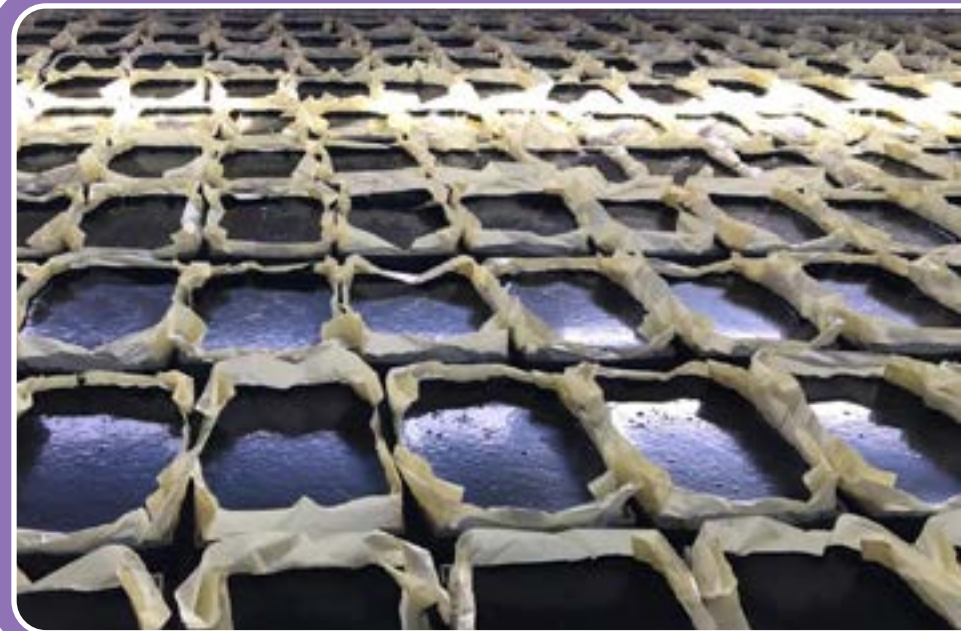
BINDER PROPERTIES	REQUIREMENTS		TEST METHOD
	MIN	MAX	
Density@25°C	1.05 approx.		ASTM D70
penetration @25°C	3	7	ASTM D5
Softening point, °C	145	155	ASTM D36
Flash point, °C	250	-	ASTM D92
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Spot test, xylene	Negative		AASHTO T102
Test on residue After TFOT			
Change of Mass WT%	-	0.2	ASTM D6

Packing: Various pickings are available for customer's purpose and conveniences:

- Kraft bag
- Meltable plastic bag
- Drum
- Bulk

►► USES of OXIDIZED BITUMEN

- Oxidized bitumen is used as repair and sealing of joints or cracks.
- Oxidized bitumen is used as adhesive to be used in thermal insulation.
- Oxidized bitumen is used in various industries like roofing, isolation, insulation flooring, mastics, pipe coatings, electrical applications.



Performance Grade Bitumen

Performance Grade (PG) Bitumen

Due to the inadequacy of penetration and viscosity based grading systems, the Strategic Highway Research Program (SHRP) in the US conducted a Project between 1987 and 1993 in order to overcome the shortcomings of empirical systems. One consequence of this Project was a performance-based binder specification with a new set of tests. The final product of the SHRP bitumen research program is a new system referred to as SUPERPAVE, which stands for Superior Performing Asphalt Pavements and called as binder specification because it is intended to function equally well for modified and unmodified bitumen's. Performance Grade (PG) Bitumen is bitumen which is graded based on its performance at different temperatures. In Superpave grading system, binders are classified according to their performance in extreme hot and cold temperatures and called as performance grade (PG) bitumen.

► PG 70-10

PROPERTIES	70-10 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 34°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ 0°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ 0°C, M-value	0.3	-	ASTM D6648

► PG 70-22

PROPERTIES	70-22 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 28°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -12°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -12°C, M-value	0.3	-	ASTM D6648

► PG 70-16

PROPERTIES	70-16 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 31°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -6°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -6°C, M-value	0.3	-	ASTM D6648

► PG 70-28

PROPERTIES	70-28 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 25°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -18°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -18°C, M-value	0.3	-	ASTM D6648

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

PG 70-34

PROPERTIES	70-34 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 22°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -24°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -24°C, M-value	0.3	-	ASTM D6648

PG 76-10

PROPERTIES	76-10 REQUIREMENTS		Test Method
	Min	Max	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 76°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 76°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 37°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ 0°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ 0°C, M-value	0.3	-	ASTM D6648

PG 70-40

PROPERTIES	70-40 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 70°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 70°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 19°C, G*/sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -30°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -30°C, M-value	0.3	-	ASTM D6648

PG 76-16

PROPERTIES	76-16 REQUIREMENTS		Test Method
	Min	Max	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 76°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 76°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 34°C, G*-sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -6°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -6°C, M-value	0.3	-	ASTM D6648

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

PG 76-22

PROPERTIES	76-22 REQUIREMENTS		Test Method
	Min	Max	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 76°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 76°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 31°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -12°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -12°C, M-value	0.3	-	ASTM D6648

PG 76-34

PROPERTIES	76-34 REQUIREMENTS		Test Method
	Min	Max	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 76°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 76°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 25°C, G*-sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -24°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -24°C, M-value	0.3	-	ASTM D6648

PG 76-28

PROPERTIES	76-28 REQUIREMENTS		Test Method
	Min	Max	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 76°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 76°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 28°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -18°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -18°C, M-value	0.3	-	ASTM D6648

PG 82-10

PROPERTIES	82-10 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 82°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 82°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 40°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ 0°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ 0°C, M-value	0.3	-	ASTM D6648

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

PG 82-16

PROPERTIES	82-16 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 82°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 82°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 37°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -6°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -6°C, M-value	0.3	-	ASTM D6648

PG 82-28

PROPERTIES	82-28 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 82°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 82°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 31°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -18°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -18°C, M-value	0.3	-	ASTM D6648

PG 82-22

PROPERTIES	82-22 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 82°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 82°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 34°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -12°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -12°C, M-value	0.3	-	ASTM D6648

PG 82-34

PROPERTIES	82-34 REQUIREMENTS		TEST METHOD
	MIN	MAX	
Before Ageing			
Flash Point, COC, °C	230	-	AASHTO T48
Viscosity @ 135°C, Pa-s	-	3.0	ASTM D4402
Dynamic Shear @ 82°C, G*/sin d, kPa	1.0	-	ASTM D7175
After RTFO			
Mass change% m/m	-	1.0	ASTM D2872
Dynamic Shear @ 82°C, G*/sin d, kPa	2.20	-	ASTM D7175
After PAV @ 100°C			
Dynamic Shear @ 28°C, G*·sin d, kPa	-	5000	ASTM D7175
Creep Stiffness @ -24°C, S, MPa	-	300	ASTM D6648
Creep Stiffness @ -24°C, M-value	0.3	-	ASTM D6648

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).

Packing

- 180(Kg) new steel drum.
- 220(Liter) new steel drum.
- Jumbo Bag 1000(kg), 300(kg) and 250(kg).



Usage

PERFORMANCE GRADE BITUMEN is primarily used in paving for both new construction and pavement rehabilitation and in both dense-graded and open graded Hot Mix Asphalt (HMA). This products could also be used for sealing of edges of new to told paving and crack sealing. Other uses include spray applications for bridge deck and pavement protective membrane with fabrics.



Liquid Bitumen

Liquid Bitumen (Cutback Bitumen)

Cutback Bitumen is consisting of penetration grade bitumen blended with solvent to control its curing time. The type of solvent controls the curing time while the amount determines the viscosity of the cutback bitumen. This action reduces the viscosity of the bitumen temporarily so it can penetrate pavements more effectively or to allow spraying at temperatures that are too cold for successfully sprayed sealing with neat bitumen. The materials which added to bitumen will vaporize after application to leave the remaining material similar in hardness to the original bitumen. The advantage of cutback bitumen have over emulsions is a much higher residual bitumen percent, typically over %80 compares with over %65-40 for bitumen emulsions. The result is more bitumen left on the roadway after curing, for the same volume of binder applied.

Physical and chemical characteristics of the product

smell	Not specified
Solubility in organic solvents	solvable
reactivity	stable
physical	Black liquid
Specific gravity	0.920-1.03
viscosity	15-6000
Boiling point	>163
Steam pressure	10>
Soluble in water	Insoluble



Rapid curing cutback bitumen (RC)

Rapid curing cutback bitumen RC- 70

RC70 is simply a combination of asphalt cement and petroleum solvent. Like emulsions, cutbacks are used because they reduce asphalt viscosity for lower temperature uses (tack coats, fog seals, stabilization material). Similar to emulsified asphalts, after a cutback asphalt is applied the petroleum solvent evaporates leaving behind asphalt cement residue on the surface to which it was applied. A cutback asphalt is said to cure as the petroleum solvent evaporates away. The use of cutback asphalts is decreasing because of environmental regulations. RC 70 contain volatile chemicals that evaporate into the atmosphere.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	70	140	ASTM D2170
Flash point (tag open-cup), °C	-	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 190°C	10	-	ASTM D402
To : 225°C	50	-	ASTM D402
To : 260°C	70	-	ASTM D402
To : 316°C	85	-	ASTM D402
residue from distillation to 360°C, percent volume by difference	55	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	80	120	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

Rapid curing cutback bitumen RC- 250

Cutback asphalt can contain between 12 and 40 percent distillate. The high demand for the distillates to be used in energy applications and ever-increasing air quality regulations have caused a steady decline in the use of cutback asphalt.

When petroleum solvent is used to flux asphalt cement, the final product is called “rapid curing” (RC) cutback asphalt. Specifications permit up to 45 percent distillate in manufacturing an RC250-cutback asphalt.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	250	250	ASTM D2170
Flash point (tag open-cup), °C	27	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 190°C	-	-	ASTM D402
To : 225°C	35	-	ASTM D402
To : 260°C	60	-	ASTM D402
To : 316°C	80	-	ASTM D402
residue from distillation to 360°C, percent volume by difference	65	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	80	120	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

▶ Rapid curing cutback bitumen RC- 800

Cutback asphalt is an asphalt cement that has a solvent or distillate such as gasoline added to make the asphalt liquid at ambient temperatures and improve its ability to coat aggregates. Two letters followed by a numerical digit designate or name a cutback asphalt. The high demand for the distillates to be used in energy applications and ever-increasing air quality regulations have caused a steady decline in the use of cutback asphalt.

When Light solvents is used to flux asphalt cement, the final product is called “rapid curing” (RC) cutback asphalt. Specifications permit up to 45 percent distillate in manufacturing an RC800- cutback asphalt.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	800	1600	ASTM D2170
Flash point (tag open-cup), °C	27	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 190°C	-	-	ASTM D402
To : 225°C	15	-	ASTM D402
To : 260°C	45	-	ASTM D402
To : 316°C	75	-	ASTM D402
residue from distillation to 360°C, percent volume by difference	75	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	80	120	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

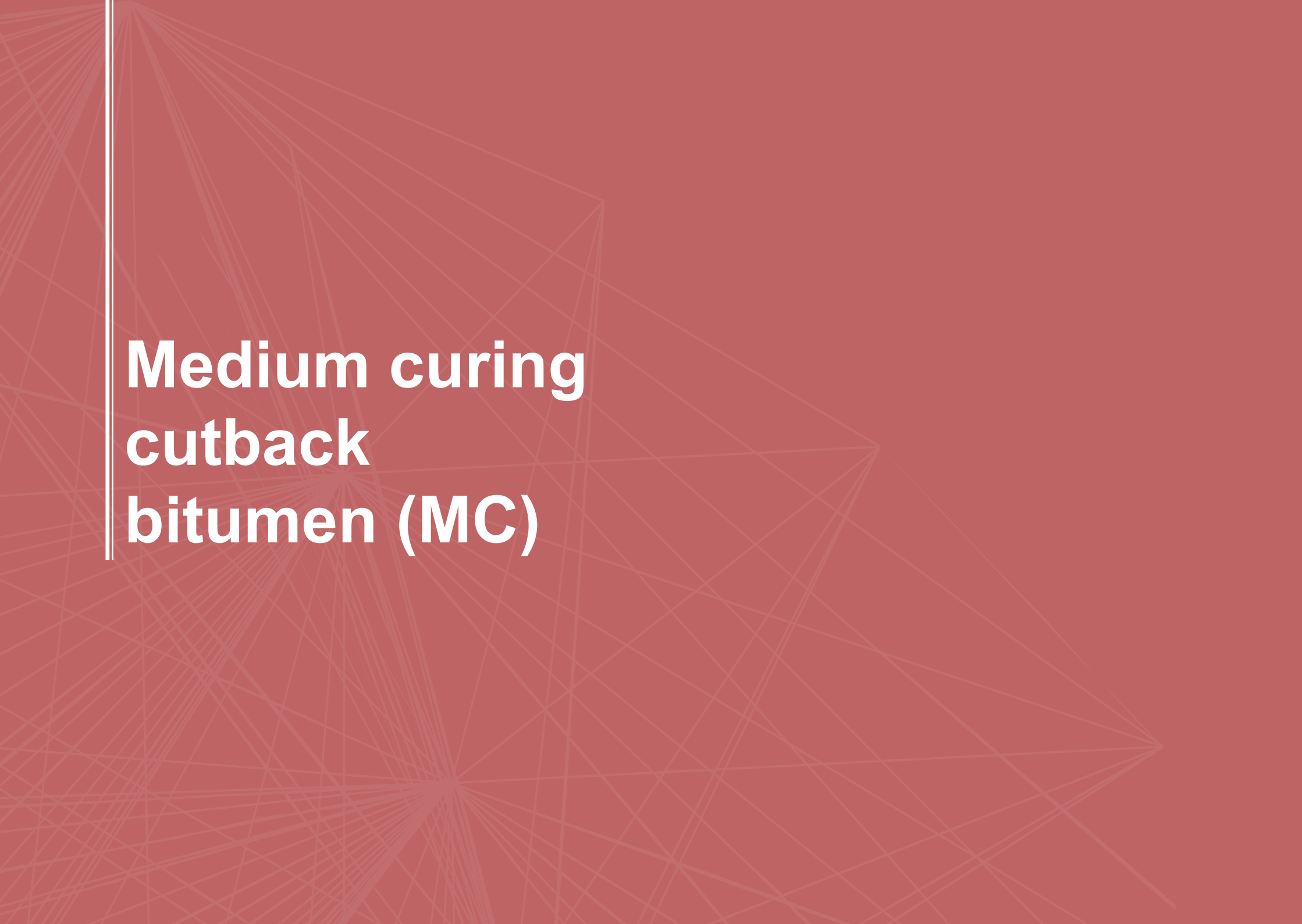
▶ Rapid curing cutback bitumen RC- 3000

Cutback bitumen RC3000 (also known as cutback asphalt) is an asphalt cement that has a solvent or distillate and at the same time improve its ability to coat aggregates. The solvent or distillate usually used for this purpose are Light solvents.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	3000	6000	ASTM D2170
Flash point (tag open-cup), °C	27	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 190°C	-	-	ASTM D402
To : 225°C	-	-	ASTM D402
To : 260°C	25	-	ASTM D402
To : 316°C	70	-	ASTM D402
residue from distillation to 360°C, percent volume by difference	80	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	80	120	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- 180(Kg) new steel drum



Medium curing cutback bitumen (MC)

► Medium curing cutback bitumen MC- 30

MC 30™ is a blend of medium curing petroleum solvents and penetration grade bitumen.

MC 30™ is used for priming newly constructed, crushed stone or natural gravel base courses prior to surfacing. Drying time is dependent on the porosity of the base course as well as on the prevailing weather conditions.

The prime must be allowed to dry before opening to traffic or proceeding with the construction of the surfacing. Special care must be taken whilst heating, as MC 30™ contains flammable cutters which have a flash point of >°40C.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	30	60	ASTM D2170
Flash point (tag open-cup), °C	38	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	-	35	ASTM D402
To : 260°C	30	70	ASTM D402
To : 316°C	75	95	ASTM D402
residue from distillation to 360°C, percent volume by difference	50	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	120	300	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Medium curing cutback bitumen MC- 70

MC 70™ is dissolved of bitumen in solvents of kerosene. The mixture obtained may be called cutback bitumen. The reduction in viscosity of the bitumen aids the construction of seal coats in road pavements as the softened mixture wets the chips more easily. The cutback agent evaporates from the seal coat, the cutback agent becoming a negligible component of the seal coat a few months after application. If significant amounts of the cutback agent remain in the seal coat an unwanted long-term softening effect may result.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	70	140	ASTM D2170
Flash point (tag open-cup), °C	38	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	-	25	ASTM D402
To : 260°C	10	70	ASTM D402
To : 316°C	65	93	ASTM D402
residue from distillation to 360°C, percent volume by difference	55	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	120	300	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Medium curing cutback bitumen MC- 250

MC 250™ is medium curing (MC) cut-back asphalt consisting of penetration grade asphalt cement and diluent or cutter of medium volatility. Petrochemical Trade Cutback MC250- conforms to the specifications of ASTM D2127 (Medium-Curing Asphalt) or AASHTO M82a) Roofing - As a waterproofing membrane and as an adhesive to stick chippings onto a flat, horizontal roof to minimize the effects of weathering from the sun. Damp-Proof Courses - Used as damp-proof membranes in concrete floors particularly for small repairs or where extensions are keyed-in to existing structures.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	250	500	ASTM D2170
Flash point (tag open-cup), °C	66	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	-	20	ASTM D402
To : 260°C	5	55	ASTM D402
To : 316°C	60	90	ASTM D402
residue from distillation to 360°C, percent volume by difference	67	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	120	300	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

► Medium curing cutback bitumen MC- 800

MC 800™ is dissolved of bitumen in solvents. Our Cutback Bitumen MC800- complies with cutback petroleum asphalts of the Medium-Curing type for use in the construction and treatment of pavements as per ASTM D97-2028 reapproved in 2004. Cutback bitumen MC800- consist of initial incorporation of asphalt into the surface of non-asphalt based course preparatory to any superimposed treatment of construction. The cutback asphalt MC800 applying to waterproofing of surfaces, plug capillary voids, coat and bond loose mineral particles.

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	800	1600	ASTM D2170
Flash point (tag open-cup), °C	66	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	-	-	ASTM D402
To : 260°C	40	-	ASTM D402
To : 316°C	45	85	ASTM D402
residue from distillation to 360°C, percent volume by difference	75	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	120	250	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99.0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

► Medium curing cutback bitumen MC- 3000

MC 3000™ is dissolved of bitumen in solvents and containing minimum %80 Bitumen, is commonly used for surface dressing and semi grouting (Penetration Macadam).

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	3000	6000	ASTM D2170
Flash point (tag open-cup), °C	66	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	-	-	ASTM D402
To : 260°C	-	15	ASTM D402
To : 316°C	15	75	ASTM D402
residue from distillation to 360°C, percent volume by difference	80	-	ASTM D402
test on residue from distillation:			
penetration at 25°C	120	250	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99,0	-	ASTM D2042

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- 180(Kg) new steel drum.



Slow Curing Cutback Bitumen (SC)

Cutback bitumen slow curing (SC)

The invention relates to bitumen cutback, in particular to the use of fatty acid esters as bitumen cutback agents. These bitumen cutback agents may also be described as cutters, cutback additives, bitumen solvents, or bitumen thinners. Bitumen is a viscoelastic mix of hydrocarbons used to hold together aggregates in pavements. It is a highly viscous waterproof adhesive at ambient temperatures. Bitumen is generally sourced as a fraction from the distillation of crude oil, but may also be found in natural deposits. The reduction in viscosity of the bitumen aids the construction of seal coats in road pavements as the softened mixture wets the chips more easily. The cutback agent evaporates from the seal coat, the cutback agent becoming a negligible component of the seal coat a few months after application.

► Slow curing cutback bitumen SC- 70

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	70	140	ASTM D2170
Flash point (tag open-cup), °C	66	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
Total distillation up to 360 ° C, volume%	10	30	ASTM D402
test on residue from distillation:			
viscosity at 60°C	400	7000	
penetration at 25°C	50	-	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99,0	-	ASTM D2042
Water,%	-	0.5	ASTM D95

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- IBC 1000(Liter) material new.

► Slow curing cutback bitumen SC- 250

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	250	500	ASTM D2170
Flash point (tag open-cup), °C	79	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
Total distillation up to 360 ° C, volume%	4	20	ASTM D402
test on residue from distillation:			
viscosity at 60°C	800	10000	
penetration at 25°C	60	-	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99,0	-	ASTM D2042
Water,%	-	0.5	ASTM D95

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

► Slow curing cutback bitumen SC- 800

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	800	1600	ASTM D2170
Flash point (tag open-cup), °C	93	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
Total distillation up to 360 ° C, volume%	2	12	ASTM D402
test on residue from distillation:			
viscosity at 60°C	2000	16000	
penetration at 25°C	70	-	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99,0	-	ASTM D2042
Water,%	-	0.5	ASTM D95

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.

► Slow curing cutback bitumen SC- 3000

property	Min	Max	Test Method
kinematic viscosity at 60°C mm ² /s	3000	6000	ASTM D2170
Flash point (tag open-cup), °C	107	-	ASTM D3143
distillate test: distillate, volume percent of total distillate at 360°C:			
Total distillation up to 360 ° C, volume%	-	5	ASTM D402
test on residue from distillation:			
viscosity at 60°C	4000	35000	
penetration at 25°C	80	-	ASTM D5
ductility at 25°C	100	-	ASTM D113
solubility in trichloroethylene, %	99,0	-	ASTM D2042
Water,%	-	0.5	ASTM D95

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- 180(Kg) new steel drum.

Special Primer (Solvent Based Primer)

Bituminous primers are one of the most important bituminous materials for waterproofing and sealing the surface. These primers can be solvent based or water based. Primers are used based on the amount of solids and drying time.

The process of prime coat involves using a low viscosity binder to a prepared. It is planned to be absorbed by the top layers of the base and provide a surface more easily wetted by a subsequent bitumen covering. The primer could carry traffic for a short time and help control dust. Seems like, primers are applied at rates between 0.5 and 1.4 L/m². Cutback bitumen which is suitable for priming is also suitable for tack coats.



Solvent Based primer D- 40

Property	Min	Max	Test Method
Kinematic viscosity at 60°C mm ² /s	35	135	ASTM D2170
Flash point (tag open-cup), °C	-	-	ASTM D3143
Distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	45	-	ASTM D402
To : 360°C	-	68	ASTM D402
Test on residue from distillation:			
Penetration at 25°C	40	90	ASTM D5
Solubility in trichloroethylene, %	99.0	-	ASTM D2042
Water, %	-	0.2	ASTM D95

Solvent Based primer D- 41

Property	Min	Max	Test Method
Kinematic viscosity at 60°C mm ² /s	25	125	ASTM D2170
Flash point (tag open-cup), °C	-	-	ASTM D3143
Distillate test: distillate, volume percent of total distillate at 360°C:			
To : 225°C	35	-	ASTM D402
To : 360°C	-	65	ASTM D402
Test on residue from distillation:			
Penetration at 25°C	20	100	ASTM D5
Solubility in trichloroethylene, %	99	-	ASTM D2042
Water, %	-	0.5	ASTM D95

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.



General application cutback bitumen

Applications of Cutback Bitumen in Bituminous (asphalt) Pavement Construction and Maintenance: Prime and Tack Coating The process of priming involves applying a low viscosity binder to a prepared but usually unbound aggregate base. It is intended to be absorbed by the top layers of the base and provide a surface more easily 'wetted' by a subsequent bituminous covering. The primer will be able to carry traffic for a short time (although this practice is uncommon) and help control dust. Generally, primers are applied at rates between 0.5 and 1.4 L/m². Cutback bitumen's suitable for priming are also used for tack coats, which are applied to an underlying surface to help with the adhesion of subsequent asphalt layer. A typical application rate is between 0.2 and 0.4 L/m². Prime Sealing Where temperatures are too cool for an effective priming operation, or where traffic is likely to upset a primed surface before the final seal can be sprayed, a primer seal can be used to give adequate protection of the pavement for periods of up to 6 to 12 months. Cutback bitumen's suitable for primer sealing can also be used in the manufacture of pre-mix asphalt, which is used in patch repairs. Spray Sealing Cutback bitumen's are used extensively in sprayed sealing applications, particularly in cooler weather where they provide improved initial stone retention due to their lower viscosity. Typically, a single application of the appropriate cutback bitumen is sprayed onto the primed pavement onto which aggregate is laid.



Safety information for cutback bitumen

Usage guide

- Consumption: The most suitable amount of bitumen is the amount of bitumen that after the expiration of the required time of at least 24 hours, the volatile matter is sublimated and the bitumen is completely absorbed.
- Level status: Should be clean/dry/without dust.



General information

- Toxic substances: Specific toxicological information is not specific for this product and toxicological information has been identified on the same components and products.
- Ignition hazard: firefighter
- Dangerous for the environment: Contamination and damage to the environment



Toxicology information

- Acute oral toxicity: Poisoning is expected to be between LD5000 < 50 mg/kg.
- Acute skin toxicity: Poisoning is expected to be between LD5000 < 50 mg/kg.
- Inhalation Poisoning: If in normal use, do not consider the risk of inhalation. (Avoid exposing garbage to).
- Irritation of the skin: slightly Irritating.
- Burning eyes: slightly Irritating.
- Respiratory tract Irritation: Inhalation of vapors or fog may irritate the Respiratory tract.

Warning

- Products may contain or release hydrogen sulfide. H₂S is very toxic, very flammable gas.
- Irritating to the skin.
- Causes damage to the following parts: respiratory system, skin, eyes, lens or cornea.
- The risk of a possible cancer. The risk of cancer depends on the duration and level of exposure.

Danger of fire

- Because the solvent bitumen flash point usually varies from 28 °C to max. 107 °C, then all of the safety tips and precautions should be followed when heating the soluble bitumen.
- The maximum soluble and pure bitumen temperature should be such that there is no heat of bitumen in the white vapor.
- The minimum temperature for bitumen is MC70 for surface asphalt at 50 °C
- Minimum temperature for bitumen is MC70 solution for mixed asphalt at 20 °C.
- Auto-ignition temperature 370 °C

Sustainability

- Sustainability: Stable under normal conditions.
- Avoid inappropriate condition: Spark, avoid heat, flame and ignition source.

Storage and transportation

- Moving precautions: Person who works with these materials should be trained to work safely and with the dangers of working with these materials.
- Storage conditions: In the dry environment and in the dark, the sunlight is burned out.

Bitumen Emulsion

Bitumen Emulsion

Bitumen emulsion is an important building material, especially in highway pavement construction. It is a mixture of bitumen (asphalt), water and emulsifying agent, dispersed in tiny particles in an aqueous medium. We know that bitumen is an oil product and it cannot be mixed with water. Addition of emulsifier with water facilitates breaking of bitumen into minute particles and keeps it dispersed in suspension.

Physical and chemical characteristics of the product.

color	brown
smell	Not specified
poisonous	non
Particle load type	Positive or negative
Flash point	Does not have
Boiling point	≤100
Solubility in organic solvents	solvable
Type of bitumen	60-70
Freezing point	-5
Type of materials to be used	Silica for cationic , calcium for anionic
packing	Bulk,220 liter barrels and 20 liter container
Storage temperature	5-60
maintenance	In the dry environment and far from the sun and high heat

Anionic Bitumen Emulsion

Anionic Emulsion

The invention relates to bitumen cutback, in The term anionic is derived from the migration of particles of bitumen under an electric field. The droplets migrate toward the anode (positive electrode), and hence the emulsion is called anionic. In an anionic emulsion, there are billions and billions of bitumen droplets with emulsifying agent at the water bitumen interface. The tail portion of the emulsifying agent aligns itself in the bitumen while the positive portion of the head floats around in the water leaving the rest of the head negatively charged and at the surface of the droplet. This imparts a negative charge to all the droplets. Since negatives repel each other, all the droplets repel each other and remain as distinct bitumen drops in suspension. A typical anionic emulsifying agent is shown below along with a diagram showing the orientation of the agent at the bitumen-water interface and the negative charge imparted to each drop.

► Anionic Bitumen Emulsion RS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL, Solution 0.02N calcium chloride, %	60	-	ASTM D6936
Distillation:			
Residue, %	55	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 60(140) °C (°F) and minimum 20(70) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion RS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	75	400	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL, Solution 0.02N calcium chloride, %	60	-	ASTM D6936
Distillation:			
Residue, %	63	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion HFRS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	75	400	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL, Solution 0.02N calcium chloride, %	60	-	ASTM D6936
Distillation:			
Residue, %	63	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042
Float test, 60 degrees Celsius, s	1200	-	ASTM D139

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125)°C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion MS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	55	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 60(140) °C (°F) and minimum 10(50) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion MS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	100	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	63	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Anionic Bitumen Emulsion HFMS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	55	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042
Float test, 60 degrees Celsius, s	1200	-	ASTM D139

► Anionic Bitumen Emulsion MS- 2h

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	100	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	40	90	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Anionic Bitumen Emulsion HFMS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	100	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042
Float test, 60 degrees Celsius, s	1200	-	ASTM D139

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125)°C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125)°C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion HFMS- 2h

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	100	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	40	90	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042
Float test, 60 degrees Celsius, s	1200	-	ASTM D139

► Anionic Bitumen Emulsion HFMS- 2s

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	50	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
Solvents, by volume of emulsion	1	7	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	200	-	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042
Float test, 60 degrees Celsius, s	1200	-	ASTM D139

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125)°C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Anionic Bitumen Emulsion SS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %	-	2.0	ASTM D6935
Distillation:			
Residue, %	57	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	200	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Anionic Bitumen Emulsion SS- 1h

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	minus		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %	-	2.0	ASTM D6935
Distillation:			
Residue, %	57	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	40	90	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 60(140) °C (°F) and minimum 10(50) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

Cationic Bitumen Emulsion

Cationic Emulsion

The term cationic is derived from the migration of particles of bitumen under an electric field also. The droplets migrate toward the cathode (negative electrode), and hence the emulsion is called cationic. The cationic emulsifying agent functions similarly to the anionic; the negative portion of the head floats around in the water leaving a positively charged head. This imparts a positive charge to all the droplets. Since positives repel each other, all the droplets repel each other and remain as distinct bitumen drops in suspension. A typical cationic emulsifying agent is shown below along with a diagram showing the orientation of the agent at the bitumen-water interface and the positive charge imparted to each drop.

► Cationic Bitumen Emulsion CRS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL Solution 8% sodium sulfosuccinate, %	40	-	ASTM D6936
Distillation:			
Residue, %	60	-	ASTM D6997
Solvents, by volume of emulsion	-	3	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Cationic Bitumen Emulsion CRS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	100	400	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL Solution 8% sodium sulfosuccinate, %	40	-	ASTM D6936
Distillation:			
Residue, %	65	-	ASTM D6997
Solvents, by volume of emulsion	-	3	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Cationic Bitumen Emulsion CMS- 2

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	50	450	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
Solvents, by volume of emulsion	-	12	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Cationic Bitumen Emulsion CMS- 2h

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	50	450	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Residue, %	65	-	ASTM D6997
Solvents, by volume of emulsion	-	12	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	40	90	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Cationic Bitumen Emulsion K1 -60

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL Solution 8% sodium sulfosuccinate, %	40	-	ASTM D6936
Distillation:			
Residue, %	60	-	ASTM D6997
Solvents, by volume of emulsion	-	3	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Cationic Bitumen Emulsion K1 -70

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 50 °C, SFS	20	-	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Emulsion failure with 35 mL Solution 8% sodium sulfosuccinate, %	40	-	ASTM D6936
Distillation:			
Residue, %	65	-	ASTM D6997
Solvents, by volume of emulsion	-	3	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	60	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	20	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.

► Cationic Bitumen Emulsion CSS- 1

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %	-	2.0	ASTM D6935
Distillation:			
Residue, %	57	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	100	250	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

► Cationic Bitumen Emulsion CSS- 1h

property	Min	Max	Test Method
Viscosity, Say bolt Furol at 25 °C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1.0	ASTM D6930
Particle charge test	positive		ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %	-	2.0	ASTM D6935
Distillation:			
Residue, %	57	-	ASTM D6997
test on residue from distillation:			
Penetration, 25°C (77°F), 100 g, 5 s	40	90	ASTM D5
Ductility, 25°C (77°F), 5 cm/min, cm	40	-	ASTM D113
solubility in trichloroethylene, %	97.5	-	ASTM D2042

Storage temperature:

- Maximum 60(140) °C (°F) and minimum 10(50) °C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk; Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.



Special Primer (Water Based Primer)

Bituminous primers are one of the most important bituminous materials for waterproofing and sealing the surface. These primers can be solvent based or water based. Primers are used based on the amount of solids and drying time.



Water Based Primer Type I

Property	Min	Max	Test Method
Density ,g/L	1010	-	ASTM D2939
Residue By Evaporation, mass%	50	55	ASTM D2939
Nonvolatile matter soluble in TCE, mass%	85	-	ASTM D2042
Water content mass%	45	50	ASTM D95
Ash content, mass %	-	14.5	ASTM D8078



Water Based Primer Type II

Property	Min	Max	Test Method
Density ,g/L	990	-	ASTM D2939
Residue By Evaporation, mass%	60	65	ASTM D2939
Nonvolatile matter soluble in TCE, mass%	94	-	ASTM D2042
Water content mass%	35	40	ASTM D95
Ash content, mass %	-	3.8	ASTM D8078

Storage temperature:

- Maximum 85(185) °C (°F) and minimum 50(125)°C (°F).

Packing

- 220 ,230 ,240(Liter) new steel drum.
- Bulk;Transit cargo and Flexi Tank.
- IBC 1000(Liter) material new.
- Gallon 20 Liters.



Safety information for emulsion bitumen

Usage guide

- Processing: The emulsion is brown in steady state.
- Level statue: Should be clean/dry/without dust.
- Stir well before use.
- Apply the material using a grass brush, a paintbrush, a roller or a paint sprayer gun.
- If you install a fiberglass mesh reinforcement between the layers, you can apply the WATER-BASED PRIMER undiluted.
- It is affected by petroleum products. Tools should be cleaned with water immediately after use, before the emulsion dries. Once it has dried, you need to use oil.



General information

- Toxic substances: The toxicological information is not specifically specified for this product.
- Ignition hazard: Not flammable.
- Dangerous for the environment: This product environmentally compatible and no harmful effects on the environment.



Sustainability

- Sustainability: Stable under normal conditions.
- Avoid inappropriate condition: Tension too, the entry harmful substances into the product.



Safety

- Use of protective coatings such as gloves and safety glasses.
- In case of contact with the skin and eyes, immediately wash the area with water and refer to the doctor.



Storage and transportation

- Fill the emulsion bitumen tanks from the bottom to prevent foaming.
- Avoid clogging and less contact with bitumen emulsion from vertical storage tanks.
- If emulsion bitumen is stored for more than 3 months, it is recommended that a grading test and viscosity test be performed before using them.
- The types of emulsion bitumen should not be mixed together, even if they have the same load.
- The high usage of bitumen emulsion mixer or circular is not recommended.
- Person who work with this materials should be trained to work safely and with the dangers of working with these materials.
- In the dry environment and in the dark, the sunlight is burned out.

BITUCO GROUP



- **Oman Office:**



(+968) 91284865



Millennium Bldg, Muscat, Oman