

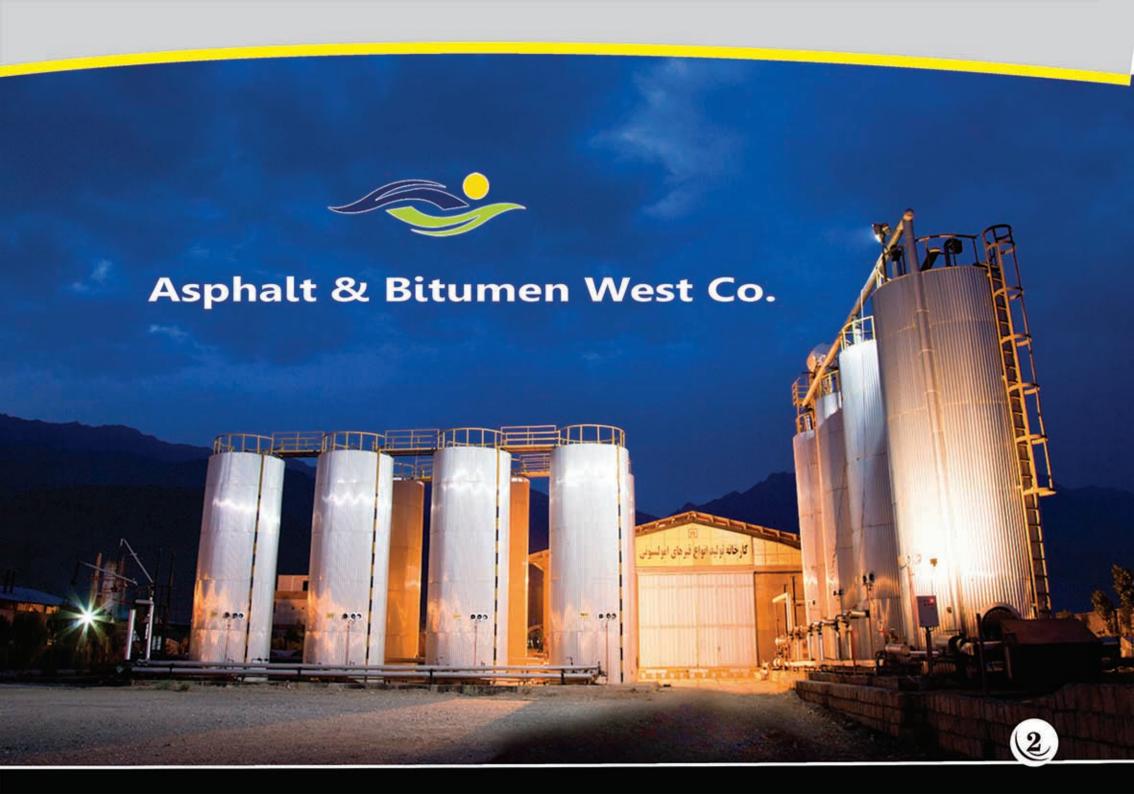
### **ABOUT US**

Asphalt and Bitumen West Company is the first producer of bitumen emulsion and cutback bitumen in West of Iran also we are proud for being one of the main contractors of construction and maintenance of a significant part of Iran's roads network.

The company's major activity contains implementation of protective asphalt including but not limited to fog seal, seal coat, surface treatment and chip seal in a way that around 2000 Km of the roads have been treated with protective coating within the past couple of years.

The products of this company bear the compulsory standard logo from ISIRI and accredited by the Technical and soil Mechanic Laboratory of the Ministry of Road and Urban Development, and all products comply with the National Iranian Standard No.12505,ASTM International Standards (D2027 D2397) and CE 1992 (EN 15322:2009) European Standard.

West company is prepared to supply different types of cutback bitumen, including MC30, MC70, MC250, MC800, MC 3000, SC70, SC250, SC800, SC3000 as well as cationic emulsion bitumen such as CSS-1, CMS-2, CRS-2, CRS-1, K1-40, K1-60 and K1-70 for domestic and global markets both in bulk and barreled packages. It is worth mentioning that all the products of this company are offered in the Iranian Mercantile Exchange and buyer may purchase the same through the brokerage.





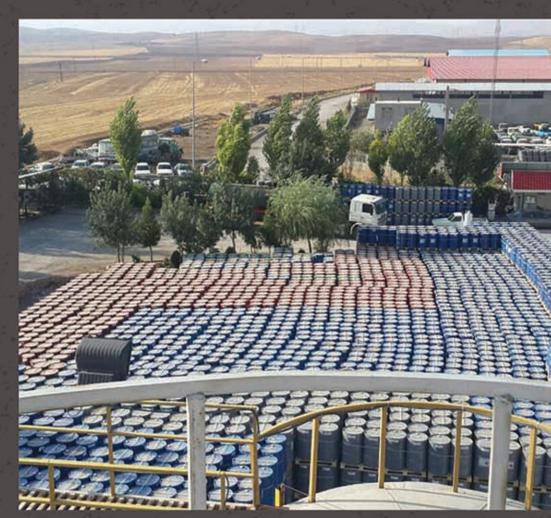
### Cutback

Cutback bitumen (liquid bitumen) is a bituminous binder in which bitumen is diluted in petroleum distillates in order to reduce bitumen's viscosity and concequently to increase the penetrating of bitumen in to the surface.

Cutback bitumen can also be sprayed at quite lower tempratures compared to the neat bitumen. The solvent will evaporate after application to leave the remaining material similar in hardness to the original bitumen.

#### Advantageous:

higher content of bitumen cement, easy to apply



Property	Min	Max	Test Method			
Kinematic viscosity at °60C mm2/s	30	60	ASTM D2170			
Flash Point (Tag Open-Cup), °C	38	=	ASTM D3143			
Distillate test: Distillate, volume percent of total Distillate to °360C:						
To °225C	-	35	ASTM D402			
To °260C	30	75	ASTM D402			
To °316C	75	95	ASTM D402			
Residue from distillation to °360C, percent volume by difference	50	-	ASTM D402			
Tests on residue from distillation:						
Viscosity at 60 °C,	30	120	ASTM D2170			
Penetration at 25 °C,	120	300	ASTM D5			
Ductility at 25 °C,	100	-	ASTM D113			
Solubility in trichloroethylene, %	99	(*)	ASTM D2042			
Water, %	<u> </u>	0.2	ASTM D95			

Type: Medium-Curing

Grade: Mc-30

Standard: ASTM D 2027M-13

Mc 30

Medium Curing, Contain %50 Bitumen Application:

- Prime Coat, Tight Surface





Type: Medium-Curing

Grade: Mc-70

Standard: ASTM D 2027M-13

### Mc 70

Medium Curing, Contain %55 Bitumen

Mixture with Aggregate:
- Mixed-In-Place: Pavement Base and Surface (Sand)

- Application:
   Prime Coat (Open and Tight Surface)
   Dust Binder

Property	Min	Max	Test Method
Kinematic viscosity at °60C mm2/s	70	140	ASTM D217
Flash Point (Tag Open-Cup), °C	38	-	ASTM D314
Distillate test: Distillate, volume percent of total Distillate to	o °360C:		
To °225C		25	ASTM D402
To °260C	10	70	ASTM D402
To °316C	65	93	ASTM D402
Residue from distillation to °360C, percent volume by difference	55	-	ASTM D402
Tests on residue from distillation:			
Viscosity at 60 °C,	30	120	ASTM D217
Penetration at 25 °C,	120	300	ASTM D5
Ductility at 25 °C,	100		ASTM D113
Solubility in trichloroethylene, %	99	-	ASTM D204
Water, %	<u> </u>	0.2	ASTM D95

Property	Min	Max	Test Method
Kinematic viscosity at °60C mm2/s	250	300	ASTM D2170
Flash Point (Tag Open-Cup), °C	66	-	ASTM D3143
Distillate test: Distillate, volume percent of total Distillate to °360C			
To °225C	÷	20	ASTM D402
To °260C	5	55	ASTM D402
To °316C	60	90	ASTM D402
Residue from distillation to °360C, percent volume by difference	67	-	ASTM D402
Tests on residue from distillation:			
Viscosity at 60 °C,	30	120	ASTM D2170
Penetration at 25 °C,	120	300	ASTM D5
Ductility at 25 °C,	100		ASTM D113
Solubility in trichloroethylene, %	99	(e)	ASTM D2042
Water, %	<b>18</b>	0.2	ASTM D95

Type: Medium-Curing

Grade: Mc-250

Standard: ASTM D 2027M-13

Mc 250

Medium Curing, Contain %67 Bitumen

### Mixture with Aggregate:

- Cold-Laid Plant Mix: Pavement Base and surface (Dense Grade Aggregate),
   Patching for Immediate Use and Stockpile
- Mixed-In\_Place: Pavement Base and Surface (Dense Grade Aggregate, Sand, Sandy Oil), Patching for Immediate Use and Stockpile

#### Application:

- Sand Seal
- Prime Coat (Open Surface)





Type: Medium-Curing

Grade: Mc-800

Standard: ASTM D 2027M-13

Mc 800

Medium Curing, Contain %75 Bitumen

- Mixture with Aggregate:
   Cold-Laid Plant Mix: Pavement Base and surface (Open and Dense Grade Aggregate), Patching for Immediate Use and Stockpile
- Mixed-In-Place: Pavement Base and Surface (Open and Dense Grade Aggregate, Sand, Sandy Oil), Patching for Immediate Use and Stockpile

#### Application:

- Single Surface Treatment
- Sand Seal

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Property	Min	Max	Test Method		
Kinematic viscosity at °60C mm2/s	800	1600	ASTM D2170		
Flash Point (Tag Open-Cup), °C	66	1.	ASTM D3143		
Distillate test: Distillate, volume percent of total Distillate to °360C:					
To °225C		ē	ASTM D402		
To °260C		40	ASTM D402		
To °316C	45	85	ASTM D402		
Residue from distillation to °360C, percent volume by difference	75	-	ASTM D402		
Tests on residue from distillation:		•			
Viscosity at 60 °C,	30	120	ASTM D2170		
Penetration at 25 °C,	120	250	ASTM D5		
Ductility at 25 °C,	100	3	ASTM D113		
Solubility in trichloroethylene, %	99		ASTM D2042		
Water, %	-	0.2	ASTM D95		
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Property	Min	Max	Test Method		
Kinematic viscosity at °60C mm2/s	3000	6000	ASTM D2170		
Flash Point (Tag Open-Cup), °C	66	*	ASTM D3143		
Distillate test: Distillate, volume percent of total Distillate to °360C:					
To °225C	-		ASTM D402		
To °260C	-	15	ASTM D402		
To °316C	15	75	ASTM D402		
Residue from distillation to °360C, percent volume by difference	80	-	ASTM D402		
Tests on residue from distillation:		-			
Viscosity at 60 °C,	30	120	ASTM D2170		
Penetration at 25 °C,	120	250	ASTM D5		
Ductility at 25 °C,	100		ASTM D113		
Solubility in trichloroethylene, %	99		ASTM D2042		
Water, %	3	0.2	ASTM D95		

Type: Medium-Curing

Grade: Mc-3000

Standard: ASTM D 2027M-13

Mc 3000

Medium Curing, Contain %80 Bitumen

### Mixture with Aggregate:

- Cold-Laid Plant Mix: Pavement Base and surface (Dense Grade Aggregate),
   Patching for Immediate Use and Stockpile
- Mixed-In-Place: Pavement Base and Surface (Open Grade Aggregate), Patching for Immediate Use and Stockpile

#### Application:

- Single Surface Treatment
- Multiple Surface Treatment





Type: Slow-Curing

Grade: SC-70

Standard: ASTM D 2026M - 15

SC 70

Applications: Dust binder

Property	Min	Max	Test Method
Kinematic viscosity at °60C [°140F], mm2/s	70	140	ASTM D2170
Flash point (Cleveland open cup), °C [°F]	66		ASTM D92
Distillate test:			
Total distillate to °360C [°680F], volume %	10	30	ASTM D402
Solubility, %	99		ASTM D2042
Kinematic viscosity on distillation residue at °60C [°140F], mm2/s	400	7000	ASTM D2170
Asphalt residue:			
Residue of 100 penetration, %	50		ASTM D243
Ductility of 100 penetration residue at °25C [°77F], cm	100		ASTM D113
Water, %	-	0.5	ASTM D95

Property	Min	Max	Test Method
Kinematic viscosity at °60C [°140F], mm2/s	250	500	ASTM D2170
Flash point (Cleveland open cup), °C [°F]	79		ASTM D92
Distillate test:			
Total distillate to °360C [°680F], volume %	4	20	ASTM D402
Solubility, %	99		ASTM D2042
Kinematic viscosity on distillation residue at °60C [°140F], mm2/s	800	10000	ASTM D2170
Asphalt residue:			
Residue of 100 penetration, %	60		ASTM D243
Ductility of 100 penetration residue at °25C [°77F], cm	100		ASTM D113
Water, %	-	0.5	ASTM D95

Type: Slow-Curing

Grade: SC-250

Standard: ASTM D 2026M - 15

SC 250

### Applications:

Open-graded aggregate Dense-graded aggregate Patching, stockpile Dust binder





Property	Min	Max	Test Method
Kinematic viscosity at °60C [°140F], mm2/s	800	1600	ASTM D2170
Flash point (Cleveland open cup), °C [°F]	93	100	ASTM D92
Distillate test:			
Total distillate to °360C [°680F], volume %	2	12	ASTM D402
Solubility, %	99		ASTM D2042
Kinematic viscosity on distillation residue at °60C [°140F], mm2/s	2000	16000	ASTM D2170
Asphalt residue:			
Residue of 100 penetration, %	70		ASTM D243
Ductility of 100 penetration residue at °25C [°77F], cm	100		ASTM D113
Water, %		0.5	ASTM D95

Type: Slow-Curing

Grade: SC-800

Standard: ASTM D 2026M - 15

SC 800

Applications:
Dense-graded aggregate
Open-graded aggregate
Dense-graded aggregate
Patching, immediate use
Patching, stockpile

Property	Min	Max	Test Method		
Kinematic viscosity at °60C [°140F], mm2/s	3000	6000	ASTM D2170		
Flash point (Cleveland open cup), °C [°F]	107	-	ASTM D92		
Distillate test:	Distillate test:				
Total distillate to °360C [°680F], volume %	-	5	ASTM D402		
Solubility, %	99		ASTM D2042		
Kinematic viscosity on distillation residue at °60C [°140F], mm2/s	4000	35000	ASTM D2170		
Asphalt residue:					
Residue of 100 penetration, %	80		ASTM D243		
Ductility of 100 penetration residue at °25C [°77F], cm	100		ASTM D113		
Water, %	-	0.5	ASTM D95		

Type: Slow-Curing

Grade: SC-3000

Standard: ASTM D 2026M - 15

SC 3000

### Applications:

Open-graded aggregate Dense-graded aggregate Patching, immediate use





### **Bitumen Emulsion**

Bitumen emulsion is a dispersion of bitumen particles in water by means of emulsifiers which is widely used in road contruction and road maintenance. Bitumen cement will be remained after gradual evaporation of water. Presence of water as the solvent offers some advantages to this bituminous binder. Environmental friendly aspect, saving energy, easy handling and storage, cost effective, safety while operation, to name but a few.



Property	Min	Max	Test Method
Test on Emulsions			
Viscosity, Saybolt Furol at 25 °C, SFC	(6)		ASTM D244
Viscosity, Saybolt Furol at 50 °C, SFC	20	100	ASTM D244
Storage stability test, 24 -h, %	-	1	<b>ASTM D6930</b>
Demulsibility, 35 mL, 0.8 % diostyl sodium sulfosuccinate, %	40		ASTM D6936
Coating ability and water resistance:			
Coating, dry aggregate	-		ASTM D244
Coating, after sprying	133		ASTM D244
Coating, wet aggregate			ASTM D244
Coating, after sprying	-	22	ASTM D244
Particle charge test	po	sitive	ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %		-	ASTM D6935
Distillation:			
Oil distilate, by volume of emulsion, %		3	ASTM D6997
Residue, %	60	-	ASTM D244
Tests on residue from sistillation test:			
Penetration, 25 °C (77 °F),100g, 5s	100	250	ASTM D5
Dustility, 25 °C (77 °F),5cm/min,cm	40	250	ASTM D113
Solubility in trichloroethylene, %	97.5	-	ASTM D2042

Type: Rapid-Setting

Grade: CRS-1

Standard: ASTM D 2397

### **Bitumen Emulsion CRS-1**

Cationic Rapid Set, Contain %60 Bitumen Cement Application:

- Tack Coat
- Chip Seal
- Penetration Macadam Dense Graded





Type: Medium-Curing

Grade: CRS-2

Standard: ASTM D 2397

## **Bitumen Emulsion CRS-2**

Cationic Rapid Set, Contain %65 Bitumen Cement Application:

- Seal Coat
- Surface Dressing
- Penetration Macadam Dense Graded

Property	Min	Max	Test Method
Test on Emulsions			
Viscosity, Saybolt Furol at 25 °C, SFC	-	-	ASTM D244
Viscosity, Saybolt Furol at 50 °C, SFC	100	400	ASTM D244
Storage stability test, 24 -h, %	- 5	1	ASTM D693
Demulsibility, 35 mL, 0.8 % diostyl sodium sulfosuccinate, %	40	-	ASTM D693
Coating ability and water resistance:	F		
Coating, dry aggregate	(3)	-	ASTM D244
Coating, after sprying	-	-	ASTM D244
Coating, wet aggregate			ASTM D244
Coating, after sprying			ASTM D244
Particle charge test	po	sitive	ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test, %			ASTM D6935
Distillation:			
Oil distilate, by volume of emulsion, %		3	ASTM D6997
Residue, %	65		ASTM D244
Tests on residue from sistillation test:			
Penetration, 25 °C (77 °F),100g, 5s	100	250	ASTM D5
Dustility, 25 °C (77 °F),5cm/min,cm	40	-	ASTM D113
Solubility in trichloroethylene, %	97.5		ASTM D204

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Property	Min	Max	Test Method		
Test on Emulsions					
Viscosity, Saybolt Furol at 25 °C, SFC		-	ASTM D244		
Viscosity, Saybolt Furol at 50 °C, SFC	50	450	ASTM D244		
Storage stability test, 24 -h, %	-	1	ASTM D6930		
Demulsibility, 35 mL, 0.8 % diostyl sodium sulfosuccinate, %	-		ASTM D6936		
Coating ability and water resistance:					
Coating, dry aggregate	Good	-	ASTM D244		
Coating, after sprying	Fair	-	ASTM D244		
Coating, wet aggregate	Fair		ASTM D244		
Coating, after sprying	Fair	15	ASTM D244		
Particle charge test	pos	sitive	ASTM D244		
Sieve test, %		0.1	ASTM D6933		
Cement mixing test, %	-	-	ASTM D6935		
Distillation:					
Oil distilate, by volume of emulsion, %	-	12	ASTM D6997		
Residue, %	65		ASTM D244		
Tests on residue from sistillation test:					
Penetration, 25 °C (77 °F),100g, 5s	100	250	ASTM D5		
Dustility, 25 °C (77 °F),5cm/min,cm	40	-	ASTM D113		
Solubility in trichloroethylene, %	97.5	3)	ASTM D2042		

Type: Rapid-Setting

Grade: CMS-2

Standard: ASTM D 2397

### **Bitumen Emulsion CMS-2**

Cationic Medium Set, Contain %65 Bitumen Cement Application:

- Asphalt Sealer
- Immediate Maintenance
- Stockpile Maintenance Mixes



Type: Medium-Curing

Grade: CSS-1

Standard: ASTM D 2397

## **Bitumen Emulsion CSS-1**

Cationic Slow Set, Contain %57 Bitumen Cement Application:

- Tack Coat
- Prime Coat
- Fog Seal
- Cold Mix Asphalt
- Asphalt Sealer
- Slurry & Micro Surfacing
- Cold Resycling
- Mulching
- Dust Palliative

Property	Min	Max	Test Method
Test on Emulsions			
Viscosity, Saybolt Furol at 25 °C, SFC	20	100	ASTM D244
Viscosity, Saybolt Furol at 50 °C, SFC			ASTM D244
Storage stability test, 24 -h, %		1	ASTM D6930
Demulsibility, 35 mL, 0.8 % diostyl sodium sulfosuccinate, %	-	(*)	<b>ASTM D6936</b>
Coating ability and water resistance:			
Coating, dry aggregate			ASTM D244
Coating, after sprying			ASTM D244
Coating, wet aggregate			ASTM D244
Coating, after sprying			ASTM D244
Particle charge test	positive		ASTM D244
Sieve test, %		0.1	ASTM D6933
Cement mixing test, %		2.0	ASTM D6935
Distillation:		- 1.2	
Oil distilate, by volume of emulsion, %			ASTM D6997
Residue, %	57	-	ASTM D244
Tests on residue from sistillation test:			
Penetration, 25 °C (77 °F),100g, 5s	100	250	ASTM D5
Dustility, 25 °C (77 °F),5cm/min,cm	40		ASTM D113
Solubility in trichloroethylene, %	97.5	-	ASTM D2042



Property	Min	Max	Test Method	
Test on Emulsions				
Viscosity, Saybolt Furol at 50 °C, SFS	-	70	ASTM D 244	
Storage stability test, -24h, %		1	ASTM D 6930	
Particle charge test	positive		ASTM D 244	
Sieve test, %	4	0.1	ASTM D 6933	
Distillation:				
Oil distillate, by volume of emulsion, %		3	ASTM D 6997	
Residue, %	40	-	ASTM D 244	
Tests on residue from distillation test:				
Penetration, °25C (°77F), 100 g, 5 s	60	300	ASTM D 5	
Ductility, °25C (°77F), 5 cm/min, cm	20	-	ASTM D 113	
Solubility in trichloroethylene, %	97.5	371	ASTM D 2042	

Cationic Emulsified Asphalt

Type: Rapid-Setting

Grade: k1-40





## Cationic Emulsified Asphalt

Type: Rapid-Setting

Grade: k1-60

Property	Min	Max	Test Method		
Test on Emulsions					
Viscosity, Saybolt Furol at 25 °C, SFS		-	ASTM D 244		
Viscosity, Saybolt Furol at 50 °C, SFS	321	100	ASTM D 244		
Storage stability test, -24h, %	15	1	ASTM D 6930		
Particle charge test	positive		ASTM D 244		
Sieve test, %	-	0.1	ASTM D 6933		
Cement mixing test, %	+	-	ASTM D 6935		
Distillation:					
Oil distillate, by volume of emulsion, %	989	-	ASTM D 6997		
Residue, %	60	. =	ASTM D 244		
Tests on residue from distillation test:					
Penetration, °25C (°77F), 100 g, 5 s	60	300	ASTM D 5		
Ductility, °25C (°77F), 5 cm/min, cm	20	10	ASTM D 113		
Solubility in trichloroethylene, %	97.5	725	ASTM D 2042		

Property	Min	Max	Test Method		
Test on Emulsions					
Viscosity, Saybolt Furol at 50 °C, SFS	15	1	ASTM D 244		
Storage stability test, -24h, %	-	1	ASTM D 6930		
Particle charge test	positive		ASTM D 244		
Sieve test, %	-	0.1	ASTM D 6933		
Distillation:					
Oil distillate, by volume of emulsion, %	-	3	ASTM D 6997		
Residue, %	67	-	ASTM D 244		
Tests on residue from distillation test:					
Penetration, °25C (°77F), 100 g, 5 s	60	250	ASTM D 5		
Ductility, °25C (°77F), 5 cm/min, cm	20	-	ASTM D 113		
Solubility in trichloroethylene, %	97.5		ASTM D 2042		

Cationic Bitumen (Asphalt) Emulsion

Type: Rapid-Setting

Grade: k1-70















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**Bitumen Emulsion Environmentally Friendly Product**