

## Description

Cutback Bitumen (Liquid Bitumen) is Bitumen that is dissolved in a solvent. Typical solvents include Naptha, gasoline and kerosene, white spirit etc. The type of solvent controls the curing time while the amount determines the viscosity of the Cutback Bitumen.

Cutbacks are divided into three classifications, Rapid-Curing (RC), Medium-Curing (MC) and Slow-Curing (SC) depending on the solvent used. They are further defined by a number, which indicates the minimum kinematic viscosity (fluidity) of the cutback.

## Characteristics

### Bitumen Rapid Curing Cutbacks

**Cutback RC-30** containing minimum 50% Bitumen, is commonly used for Prime Coating.

**Application:** Priming of all non-bituminous road buses, provision of temporary surfaces(deviations).

**Cutback RC-250** containing minimum 65% Bitumen, is commonly used as a Prime Coating and for maintenance mixing.

**Cutback RC-3000** containing minimum 80% Bitumen, is commonly used for surface dressing and semi grouting.

**Application:** Priming of all non-bituminous road buses, provision of temporary surfaces (deviations).

	Standard	RC-30	RC-70	RC-250	RC-3000
		RANGE Min/Max	RANGE Min/Max	RANGE Min/Max	RANGE Min/Max
Kinematic viscosity at 60°C, cST	ASTM D2170	30/60	70/140	250/500	3000/6000
Flashpoint (tag open cup) °C	ASTM D3143	-/-	-/-	-/25	-/27
<b>Distillation Test: Distillate, volume % of total Distillate to 680°F(360°C)</b>					
To 437°F(225°C)	ASTM D402	55/-	50/-	35/-	-/-
To 500°F(260°C)	ASTM D402	75/-	70/-	60/-	25/-
To 600°F(316°C)	ASTM D402	90/-	85/-	80/-	70/-

Cutback

Residue from distillation to 680°F(360°C), % volume by difference	ASTM D402	50/-	55/-	65/-	80/-
<b>Test on Residue from Distillation Test</b>					
Penetration 77°F(25°C) 100g, 5s mm	ASTM D5	80/120	80/120	80/120	80/120
Ductility 77°F(25°C) 5cm/min cm	ASTM D113	100/-	100/-	100/-	100/-
Solubility in Trichloroethylene (%)	ASTM D2042	99/-	99/-	99/-	99/-
Water, % volume	ASTM D95	-/0.2	-/0.2	-/0.2	-/0.2

### Bitumen Medium Curing Cutbacks

**Cutback MC-30** containing minimum 50% Bitumen, is commonly used as a Prime Coating. It is homogeneous and will not foam (as observed visually) when heated to application temperature.

**Cutback MC-70** containing minimum 55% Bitumen, is commonly used as a Prime Coating and Maintenance Mixing.

**Cutback MC-250** containing minimum 67% Bitumen, is commonly used as a Prime Coating and Maintenance Mixing.

**Cutback MC-3000** containing minimum 80% Bitumen, is commonly used for surface dressing and semi grouting.

**Application:** Priming of all non-bituminous road buses, provision of temporary surfaces (deviations).

	Standard	MC-30	MC-70	MC-250	MC-800	MC-3000
		RANGE Min/Max	RANGE Min/Max	RANGE Min/Max	RANGE Min/Max	RANGE Min/Max
Kinematic viscosity at 60°C, cST	ASTM D2170	30/60	70/140	250/500	800/1600	3000/6000
Flashpoint (tag open cup) °C	ASTM D3143		38/-	66/-	66/-	66/-
<b>Distillation Test: Distillate, volume % of total Distillate to 680°F(360°C)</b>						
To 437°F(225°C)	ASTM D402	55/-	-/20	-/20	-/-	-/-
To 500°F(260°C)	ASTM D402	75/-	10/20	5/55	-/40	-/15
To 600°F(316°C)	ASTM D402	90/-	65/93	60/90	45/85	15/75
Residue from distillation to 680°F(360°C), % volume by difference	ASTM D402	50/-	55/-	67/-	75/-	80/-
<b>Test on Residue from Distillation Test</b>						
Penetration 77°F(25°C) 100g, 5s mm	ASTM D5	80/120	120/300	120/300	120/250	120/300
Viscosity at 140°F(60°C)	ASTM D2170	-/-	30/120	30/120	30/120	30/120

Cutback

Ductility 77°F(25°C) 5cm/min cm	ASTM D113	100/-	100/-	100/-	100/-	100/-
Solubility in Trichloroethylene (%)	ASTM D2042	99/-	99/-	99/-	99/-	99/-
Water, % volume	ASTM D95	-/0.2	-/0.2	-/0.2	-/0.2	-/0.2

### Bitumen Slow Curing Cutbacks

	Standard	SC-70	SC-250	SC-800	SC-3000
		RANGE Min/Max	RANGE Min/Max	RANGE Min/Max	RANGE Min/Max
Kinematic viscosity at 60°C, (140°F),mm <sup>2</sup> /s	ASTM D2170	70/140	250/500	800/1600	3000/6000
Flashpoint (Cleveland open cup) °C[°F]	ASTM D92	60/-	60/-	70/-	70/-
<b>Distillation Test</b>					
Total distillate to 360°C(680°F), volume %	ASTM D402	-/35	-/25	-/15	-/8
Solubility	ASTM D2024	95/-	95/-	95/-	95/-
Kinematic viscosity at 60°C, (140°F),mm <sup>2</sup> /s	ASTM D2170	200/7000	400/10000	1000/16000	2000/35000
<b>Asphalt Residue</b>					
Residue of 100 penetration, %	ASTM D243	40/-	50/-	60/-	75/-
Ductility of 100 penetration residue at 25°C(77°F), cm	ASTM D113	50/-	50/-	50/-	50/-
Water, % volume	ASTM D95	-/0.5	-/0.5	-/0.5	-/0.5

Cutback