

{BITUMEN RANGES FOR ROAD CONSTRACTION AND WATERPROOFING} CECPL-8003

#### **OVERVIEW & BITUMEN GRADES**

Grades VG10 (Bitumen 80/100), Grade VG30 (Bitumen 60/70), Grade 85/25 (Oxidized Bitumen), Grade VG40 etc.

Oxidized Bitumen 85/25 is a standard oxidized grade bitumen usually used for various purposes in the construction business. It is a waterproofing asphalts produced by reacting selected petroleum asphalts without adding catalyst. Industrial Bitumen is a dark, petroleum residue modified by the oxidation process. Its consistency ranges from highly viscous to solid. Industrial Bitumen is a safe and inexpensive material which has multiple uses in industry and a wide range of applications and has characteristics of Waterproofing, Plasticity, Adhesion and resistance towards acid and alkalis. It also makes an efficient electrical insulator, because it has excellent dielectric strength. Bitumen 85/25 is a semi-solid CLEXODAM-GRADE of pure petroleum bitumen categorized in polycyclic CLEXODAM-GRADE 85/25 is based on petroleum bitumen which is made by blowing bitumen 60/70 by very hot air. CLEXO Company guaranty the quality of CLEXODAM-GRADE 85/25 with check quality and quantity of the bitumen 85/25 during the loading to the vessel and controlling the production by QC by batch test report before shipping.

#### **Uses of Oxidized Asphalt**

- However Oxidized asphalt 85/25 uses in the chemical, fuel, paints, lacquers, Varnishes, paper-pulp-board, textile processing and road construction. Also pavement, crack seal and repairmen, civil works, roofing, construction industries. However sealing and insulating buildings, adhesive, construction materials additive. Also dust-binding, coating, insulating and impregnating agent, make rubber and plastic products.
- Moreover the blown asphalt 85/25 products are for paving, roofing. However used in asphalt based paints for
  corrosion protection of metals. Meanwhile in lining public works structures, adhesives in electrical laminates,
  base for synthetic turf. Meanwhile typical uses for oxidized asphalt 85/25 include roofing and pipe coating.
  Also Portland cement pavement. Also hydraulic applications, paint manufacturing.

## **Viscosity Grade Bitumen Range**

Viscosity Grade Bitumen (Asphalt) is a Bitumen grade mostly used as a Paving Grade and it's suitable for road construction and for the asphalt pavements producing with premier attributes. VG Bitumen is usually used in the production of hot mix asphalt.

Viscosity Grade Bitumen is petroleum grade bitumen, which produced from fractional vacuum bottom which comes from distillation of crude oil, which feasible appliance and behavior changes according to its temperature.

Viscosity Grade bitumen is specified by ASTM Standard D3381-09 and AASHTO M226-80 (2008). VG Bitumen specifications cover by Viscosity at 60 °C (140 °F).

We have two methods of grading: Standard Viscosity Grade Bitumen (AC-Grades), in which the Viscosity of the standard bitumen (asphalt) is measured at 60 °C (140 °F).

For further details visit: www.clexoengineering.com

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# We have two methods of Grading:

- Standard Viscosity Grade Bitumen (AC-Grades), in which the Viscosity of the standard Bitumen (Asphalt) is measured at 60 °C (140 °F).
- RTFOT Viscosity Grade Bitumen (AR-Grades), in which the Viscosity of bitumen (asphalt) is measured at 60 °C (140 °F) after the roll on thin film oven test.

Viscosity grade bitumen has a thermoplastic feature which causes the material to soften at high temperatures and to harden at lower temperatures. This temperature viscosity relevance is significant when specifying the performance parameters such as the adhesion, rheology, durability and application temperatures of bitumen. In the Viscosity Grade Bitumen specifications, the most important emphasizes is based on the Bitumen ductility.

## Viscosity Grade Bitumen Uses:

## VG-10 BITUMEN

VG-10 is mostly used in spraying applications such as surface dressing and Paving in very cold climate instead of 80/100 penetration bitumen grade. It is also used to produce Bitumen Emulsion and Modified Bitumen products.

# **VG-20 BITUMEN**

VG-20 is used for paving in cold climate & high altitude regions.

#### VG-30 BITUMEN

VG-30 is especially used to construct extra heavy duty Bitumen pavements that need to tolerate significant traffic loads. It can be used instead of 60/70 penetration bitumen grade.

## VG-40 BITUMEN

VG-40 is used in highly stressed areas such as intersections, near toll booths and truck parking lots instead of 30/40 penetration grade. Because of higher viscosity, stiffer Bitumen mixes can be produced to amend resistance to shoving and other problems related to higher temperature and heavy traffic loads. Atlas Oil has the capability to supply customers a wide range of Iran Bitumen viscosity grades such as VG 10, VG 20, VG 30, VG 40.

## **INSTRUCTIONS FOR USE**

CLEXODAM-GRADE uses in the chemical, fuel, paints, lacquers, varnishes, paper-pulp-board, textile• processing, road construction, pavement, crack seal and repairmen, civil works, roofing, construction industries; sealing and insulating buildings, adhesive, construction materials additive, dust-binding, insulating impregnating agent, make rubber and plastic products. The oxidized bitumen 85/25 products are for paving. also used in asphalt-based paints for corrosion protection of metals, in lining public works structures, adhesives in electrical laminates, base for synthetic turf; typical uses for bitumen 85/25 used also for• waterproof application and corrosion resistance for pipe coating, Portland cement pavement, hydraulic applications, paint manufacturing, caulking, mastics, and damp proofing. bitumen 85/25 is using insulation and isolation bitumen membrane sheet. Also, Car undercoating Automobile industry is specially required for Blown Asphalt. Vehicle

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undercoating material is based on Bitumen. Bitumen provides excellent waterproof, dust proof and noise proof for automobile undercoating.

## **TECHNICAL DATA**

Bitumen 85/25	Test method	Unit	Specification
Specific gravity @25/25 C	ASTM D70	(Kg/m3)	1.05 approx.
Penetration @25°C	ASTM D5	Mm/10	20/30
Softening point °C	ASTM D36	°C	80/90
Ductility @25°C	ASTM D113	Cm	1.5min
Loss on heating(wt)%	ASTM D6	Wt. %	0.2 max
Flashpoint c	ASTM D92	°C	260 min
Solubility is CS2(wt) %	ASTM D4	Wt. %	99 min
Specific gravity @25/25 C	ASTM D70	(Kg/m3)	1.05 approx.

VISCOSITY GRADE (VG) BITUMEN	N SPECIFICATIO	ON AS PER IS 73:20	006	
Characteristics	VG-10	VG-20	VG-30	VG-40
Kinematic Viscosity, 135°C, CST, min	800	1600	2400	3200
Flashpoint, C, min	250	300	350	400
Flashpoint, C, min	220	220	220	220
Solubility in trichloroethylene, %, min	99.0	99.0	99.0	99.0
Penetration at 25°C	80-100	60-80	50-70	40-60
Softening point, C, min	40	45	47	50
Tests on residue from thin film over test/R'	TFOT			
I. Viscosity ratio at 60°C,max	4.0	4.0	4.0	4.0
II. Ductility at 25°C, cm, min	75	50	40	25

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# PICTURES/IMAGES AT GLANCE





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