

# Industrial Bitumen

Oxidised Bitumen For Waterproofing / Other Application



## Description

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.

## Characteristics

Characteristics of Industrial Bitumen is given in the Annexure A attached herewith.

## Application

- **In building floors:** damp-proofing and waterproofing; acid-alkali resistant flooring, conductive flooring; sparkless flooring.
- **In building/roofing:** manufacture of roofing felts, adhesives, primers, damp-proof coating compositions, liquid roof coatings, plastic cements and hot carriage roofing compounds.
- **Hydro projects:** canal lining, embankment, hydraulic structure, dam lining protection and sand stabilisation.
- **Roads:** construction and maintenance.
- **Industrial use:** lamination, manufacture of caulking compounds, joint fillers, rubber extenders, battery sealing compounds, cable filling compounds etc.

## Advantages

- Easy to apply.
- Excellent durability.
- Comparatively cheaper and widely available.

## Application Methodology

- Heat gradually till the bitumen melts completely. Heat the required quantity only.
- Continuously stir to prevent local overheating. A thermometer should be used to ensure that the bitumen is not overheated or it will lose much of its properties.
- Bitumen brought up to its normal working temperature is applied with a brush or by pouring and spreading using a rubber squeegee.

## Health & Safety

- Use goggles, gumboots, nose covers and hand gloves during application
- Clean hands with warm soap water after application

## Packing

Available in 200 kg drums or 25 kg cakes.

## Storage

Keep in cool and dry place in air tight containers under shed away from heat

## Specification of Bitumen

Bitumen	Straight Grade*				Industrial Grades**								Method of Test
	30/40	20/40	10/20	80/90	110/120	85/40	85/25	90/15	115/15	135/10	155/6		
LS Grade	5.35	65/25	75/15			85/40	85/25	90/15	115/15	135/10	155/6		
Specific Gravity at 27°C minimum	0.99	1.00/1.05	1.03/1.05	1.03/1.08	1.04/1.09	1.00-1.05	1.01-1.05	1.01-1.06	1.01-1.06	1.02-1.07	1.02-1.07	IS:1202: 1978	
Flash Point, Pensky martens Cloused Type, °C minimum	175	175	200	200	200	225	225	228	225	225	228	IS:1202: 1978	
Softening Point, °C	50 to 65	50 to 70	65 to 80	80 to 90	110 to 120	80 to 90	80 to 90	85 to 100	110 to 120	130 to 140	150 to 160	IS:1205: 1978	
Penetration at 25 °C, 100g, 5 sec, in 1/100 cm	30 to 40	20 to 30	10 to 20	6 to 12	3 to 7	35 to 45	20 to 30	10 to 20	8 to 20	7 to 12	2 to 10	IS:1203: 1978	
Ductility at 27 °C, in cm minimum	12	10	2.5			3	3	2	2	1	0	IS:1208: 1978	
Loss on heating, percent by weight, maximum	1	0.30	0.30	0.10	0.10	0.30	0.30	0.30	0.30	0.30	0.30	IS:1212: 1978	
Percent by weight soluble in carbon-disulphide, min	99	99	99	99	99	99	99	99	99	99	99	IS:1216: 1978	
Industrial Uses													
Water Proofing													
Lamination Industry													
Bituminous Paper													
Paints, Varnishes and Japans													
Cold Storage & Refrigeration													
Printing Inks													
Electrical Cable Junction Boxes													
Electrical Cable Manufacture													
Battery Containers													
Battery Sealing Compounds													
Rubber Industry													
Pipe Coating													
Joint Filling Compounds													
Mastic for flooring & roofing													
Damp Proof Courses													
Coal Briquetting													

Application for Use

\* As per IS:73/2006

\*\* As per IS: 702/1988

Current production is non-ductile \*\* (Method A)

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A large, faint watermark logo in the background, featuring a shield with a stylized 'N' and 'P' and a house icon with a roof.