

# Industrial Bitumen

Industrial Oxidised Bitumen



## 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 Industrial 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.
- Industrial Bitumen brought up to its normal working temperature is applied with a brush or by pouring and spreading using a rubber squeegee.

## Health & Safety

- Avoid contact with skin / eyes and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

## 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 Grade **							Method of Test
	30/40	20/30	10/20	80/90	110/120	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	1.00 - 1.05	1.00 - 1.06	1.00 - 1.06	1.02 - 1.07	1.02 - 1.07	IS:1202:1978	
Flash Point Pnisky marten Cloused Type, °C minimum	175	175	200	200	200	225	225	228	225	225	228	IS:1202:1978	
Softening Point, °C	50 - 60	50 - 70	65 - 80	80 - 90	110 - 120	80 - 90	80 - 90	85 - 100	110 - 120	130 - 140	150 - 160	IS:1202:1978	
Penetratin at 25 °C, 100g, 5 sec, in 1/100 cm	30 - 40	20 - 30	10 - 20	6 - 12	3 - 7	35 - 45	20 - 30	10 - 30	8 - 20	7 - 12	2 - 10	IS:1202:1978	
Ductility at 27 °C, in cm minimum	12	10	2.5	-	-	3	3	2	2	1	0	IS:1202:1978	
Loss on heting, present 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:1202:1978	
Percent by weight soluble in carbon-disulphide, min	99	99	99	99	99	99	99	99	99	99	99	IS:1202:1978	
<b>Industrial Uses</b>													
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 Compound													
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:702/1998

Current Production is Non-Ductile\*\* (Method A)



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- Waterproofing & Insulation    ■ Road Surfacing
- Sealants & Adhesives    ■ Pipeline Coatings
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