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	115/6	
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)

Advisory Cell

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