

## OVERVIEW

RANPIPE-CBT 4MM is an Anti-Corrosive tape based on Coal Tar/ Bitumen and specifically designed to comply with the requirements of IS: 10221-1982. It incorporates a centre core of 45 gsm/sqm of Fibre Glass Tissue and HMHDPE film of 20 micron which lends mechanical strength, dimensional stability to the product. These centre cores are laminated with 3 layers of coal tar or bitumen mix. The final product has a top and bottom layer of thermo fusible HMHDPE Film. All the seven layers are calendared together to create this revolutionary 2mm thick tape. The material conforms to IS: 15337-2003 and AWWA: C203-2008.

## PROPERTIES

- Excellent resistance to positive water & vapor pressure.
- Good heat resistance.
- Moisture Resistance.
- Good dimensional stability under tension.
- High puncture and fatigue resistance.
- High tensile and tear strengths.
- Corrosion Prevention.

## INSTRUCTIONS FOR USE

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the waterproofing system are as follows:

### SURFACE PREPARATION

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections and protrusions shall be removed and repaired.

### PRIMING

Apply Solvent based RANSBITU-PRIMER @ 0.3-0.4L /Sqmt as per ASTM D 41 & IS: 3384-1986 and BS 4147-1980 to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily creates adhesion between the membrane and the pipe surface. In addition to that the

primer also acts as a binder for the dust which gets accumulated on the pipe surface even after cleaning.

### ALIGNMENT & TORCHING

After RANSBITU-PRIMER, next step is followed; RANPIPE-CBT 4MM Pipe Wrap Coating is then wrapped around the pipe in spiral fashion and bonded to pipe by thermo fusion process using LPG Torch. An overlap of 10mm is to be allowed. The overlaps are to be sealed by thermo fusion process.

- An area of 250 mm at the end of the Pipes is to be left uncoated to permit installation and welding. This area is to be coated after welding.

### CAUTION

- Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

### SEALING

- Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothed and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane. Up stand.

Flashing details are accomplished using cut pieces of RANPIPE-CBT 4MM in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane.

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All angles and abutments should be sealed with extra care to ensure full bonding. All brushes and tools should be cleaned by water immediately after use.

**PRECAUTION:**

Wash all the tools and tackles with industrial solvent immediately after the application is completed.

**HEALTH & SAFETY**

Avoid prolonged contact with eyes and skin. For detailed information refer to relevant material safety data sheet.

**PACKGING & STORAGE**

RANPIPE-CBT is supplied in (10.00 Mtr L x 1.00 Mtr W) as per given details:-

**THICKNESS:-**

**2MM** - (1Mx10M), **Weight** - 2.5 Kg-2.8 Kg

**3MM** - (1Mx1M), **Weight** - 3.75 Kg-4.0 Kg

**4MM** - (1Mx10M), **Weight** - 5.0 Kg-5.2 Kg

Store Rolls in a clean dry area protected from direct sunlight and extreme heat and cold. Unopened Rolls can be stored for 12 months.

**TECHNICAL DATA**

**Product** 4mm Anti-Corrosive Pipe Wrapping Tape

**RAW COAL TAR PITCH**

Characterization	Values	Standard
Softening point 0°C	65 121	ASTM D36
Specific gravity	1.30±0.05	ASTM D71
Ash content, %	0.5 Max.	ASTM D2415
Physical state	Solid at ambient temperature	

**FILLER**

Characteristics	Requirement	Test Method
Fineness: %	Shall pass through	
w/w, minimum	mesh size of 75	
	microns	ASTM D1366
Loss on ignition at 800° C, w/w max.	10	ASTM D1208

**PHYSICAL PROPERTIES OF COAL TAR TAPE**

Property	Requirement		Test method
	Min.	Max.	
Service temperature (0°C)	-	60	-
Tape thickness m1T1	4.0	4.5	AWWA C-203
Weight average (kg/sq.m/mm)	1.25	-	ASTM D146
Breaking strength in longitudinal direction kN/m	0.7	-	AWWA C-203
Adhesion	AWWA C-203.		
Insoluble content % by wt. in Petrol	93 minimum (procedure given in ANNEXURE-I)		

**FABRIC**

Type	Description
	The fabric shall be a thin, flexible, uniform mat or tissue composed of glass fibers in an open structure bonded with a suitable resinous inert material compatible with coal tar.

<b>Weight (m in) g/m2</b>	40
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<b>Thickness (min.) mm</b>	0.3
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<b>Breaking load in the longitudinal direction.</b>	2.28KN/m (min.)
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<b>Porosity</b>	When related to pressure difference across the sample, the glass fibre fabric shall have porosity of not less than 0.6mm and not more than 1.9mm of water at an average air velocity of 61 m/minute (1 m/sec.)
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<b>Temperature Resistance</b>	The fabric shall be unaffected under load in hot coal tar at 288°C for one minute. It shall not shrink length wise or width wise.
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<b>Pliability test</b>	No cracking shall take place when bent over a mandrel of 3mm radius through 90° arc at a uniform speed of approximately 2 seconds after immersing in water for 10 to 15 minutes.
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**PHYSICAL PROPERTIES OF COAL TAR COMPONENT IN THE FINISH TAPE**

Property	Requirement		Test method
	Min.	Max.	
Softening point (0C)	65	121	ASTM D36
Penetration at 250C/100g/ 10 ' mm/5sec	1	9	ASTM D5/BS-4164
Filler %	20	35	ASTM D 2415 or AWWA C-203

**TECHNICAL CHARACTERISTICS FOR PIPE WRAP PRIMER**

Type	Description
	Fast drying, synthetic, chlorinated rubber-synthetic plasticizer-solvent based
<b>Drying time (tack free)</b>	15 minutes (approx.) (ASTM D1640)
<b>Flash point</b>	> 230C (ASTM D93/D3941)
<b>Volatile matter (105-11 OOC) percent by mass</b>	75 (maximum) (ASTM D2369)
<b>Viscosity, on FORD CUP NO. 4 (4mm nozzle) at 230C</b>	35-60 seconds (ASTM D1200)
<b>DFT</b>	25 microns/coat (minimum)
<b>Coverage (Theoretical)</b>	10 M2/Lit/Coat
<b>Coverage (Practical) @ 25 microns DFT coat</b>	6 M2/Lit/Coat (minimum) (ASTM D344)
<b>Application properties</b>	By brush/ spray should produce an effective bond between metal and subsequent coaltar tape
<b>Adhesion test ( after 72 hours)</b>	The primer shall be tested after applying tape coating as per AWWA C-203.

## PICTURES/IMAGES AT GLANCE



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