

Bande AC-MR[®]



PREVENTIVE REINFORCING

- **PRESSURE RESISTANCE REINFORCING** -
- **MECHANICAL INTEGRITY** -
- **ANTICORROSION** -

YOVANN'S Co.[™]
COMMITTED TO SAVE ENERGY

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Bande AC-MR[®]

ANTICORROSION - MECHANICAL REINFORCEMENT

TECHNICAL DATA

TENSILE STRENGTH	ASTM D3039-17	258 MPa
COMPRESSION STRENGTH	ASTM D695-10	133 MPa
TENSILE MODULUS	ASTM D790-17	6.14 GPa
LAP SHEAR STRENGTH	ASTM D5868-01	2.36 MPa
SHORE HARDNESS	ASTM D2240-15	76 D
CHARPY IMPACT STRENGTH	ISO 179-1	29 kJ/m²
COEFF. THERMAL EXPANSION	ASTM E831-14	14.8 µm / C°
GLASS TRANSITION TEMP.	ASTM D5868	96°C
SERVICE TEMPERATURE	TGA TEST	300°C
SALT SPRAY (FOG) TEST	ASTM B117-16	240 H - RiO

Code: 1005L SIZE: W. 10 cm X L. 5 M x T. 0.8 mm - Color: BLACK

Code: 1005XL SIZE: W. 15 cm X L.10 M x T. 0.8 mm - Color: BLACK

Bande AC-MR IS NEWLY DEVELOPED ANTICORROSION TAPE.

THE ADVANCED POLYPROPYLENE RESIN

ON THE FIBERGLASS SUBSTRATE INCREASE THE MATERIAL PROPERTY AND ADESIVE STRENGTH AS MUCH AS THE SHIELDING EFFECT IS MAXIMIZED TO PROTECT METAL PIPE FROM AIR & WATER WITHOUT FURTHER ANY RUST-INHIBITOR.

WORKS ON WET OR CORRODED PIPES, EVEN WORKS UNDER WATER ACTIVATED BY WATER IT CURES TO PRODUCE A TOUGH CHEMICAL RESISTANT WRAP AROUND PIPE

HIGH-TEMPERATURE COMPOSITE WRAP

EXCELLENT IMPACT AND CRACK PROPAGATION RESISTENCE

HIGH DIELECTRIC STRENGTH

EXCELLENT IMPERMEABILITY TO THE WATER

GREAT RESISTANCE TO THE CHEMICAL AGENTS

EXCELLENT RESISTANCE TO CATHODIC DISBONDEMENT

NON-TOXIC, NO VOCs, NO DETERGENT SUBSTANCE

FOR CHEMICAL COMPATIBILITY SEE OUR WEBSITE : www.yovannsco.com

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Bande AC-MR XL



Bande AC-MR L



DIRECTION FOR USE

**SUITABLE ON THE WET OR IMMERGED SURFACES
SMALL LEAKAGE (FLOW) ALLOWED AT THE MOMENT OF IMPLEMENTATION**

REMOVE ALL LOOSE RUST, PAINT WITH A WIRE BRUSH (ISO S12)

USING WET GLOVES, REMOVE BANDAGE FROM THE FOIL POUCH.

IMMERSE IN TEMPERATE WATER FOR 20 - 30 seconds.

WRAP **Bande AC-MR ONTO PIPE IN A SPIRAL PATTERN MAKING A 50% OVERLAP.**

WHEN WRAPPING, APPLY TENSION AND PRESS THE WRAP ONTO SURFACE.

WET THE GLOVES IN WATER.

SQUEEZE AND MOLD TAPE IN THE DIRECTION OF THE WRAP UNTIL TACKY TO TOUCH (2 min.)

WORKING TIME: 5 min. - SET TIME IN 30 - 45 min. - FULL CURE TIME IN 24 H

CHEMICALLY INERT AND NONFLAMMABLE - THERMALLY STABLE UP TO 300°C

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Bande AC-MR L

CODE: 1005L - DIM: 10 Cm X 500 Cm

ANTICORROSION - MECHANICAL REINFORCEMENT

PREVENTIVE REINFORCEMENT FOR PIPE WALL-THICKNESS

PIPE DEFECT - appearing inside or outside the line.

SMALL LEAKAGE (CONTINUOUS FLOW) allowed at the moment of implementation of **Bande AC-MR**
Defect which can possibly grow into a through-wall crack, hole during the theoretical life of protection.

COEFFICIENT OF SAFETY 2

LENGTH OF PROTECTION : 1mL

NB = NUMBER OF **Bandes AC-MR L**

NP = NUMBER OF LAYERS

Ø / Bar	4Bar	6Bar	8Bar	10Bar	12Bar	14Bar	16Bar	18Bar	20Bar
DN 50 - 2"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP	NB 1 NP 2	NB 1 NP 2	NB 1 NP 2	NB 1 NP 2	NB 1 NP 2
DN 80 - 3"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 2 NP 2	NB 2 NP 1
DN 100 - 4"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1
DN 150 - 6"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 2 NP 2	NB 2 NP 2	NB 4 NP 2	NB 4 NP 2
DN 200 - 8"	NB 3 NP 1	NB 3 NP 1	NB 3 NP 1	NB 3 NP 1	NB 3 NP 1	NB 6 NP 2	NB 6 NP 2	NB 6 NP 2	NB 6 NP 2
DN 250 - 10"	NB 4 NP 1	NB 4 NP 1	NB 4 NP 1	NB 4 NP 1	NB 7 NP 2	NB 7 NP 2	NB 7 NP 2	NB 7 NP 2	NB 7 NP 2
DN 300 - 12"	NB 4 NP 1	NB 4 NP 1	NB 4 NP 1	NB 8 NP 2	NB 8 NP 2	NB 8 NP 2	NB 8 NP 2	NB 8 NP 2	NB 12 NP 3



1 SPIRAL LAYER WITH A 50% OVERLAP IS EQUIVALENT TO 1.6 mm THICKNESS

Bande AC-MR XL

CODE: 1005XL - DIM: 15 Cm X 1000 Cm

The use of the **Bande AC-MR XL** is recommended for diameters greater than **DN 300 - 12"**

COEFFICIENT OF SAFETY **2**

LENGHT OF PROTECTION : **1mL**

NB = NUMBER OF *Bande AC-MR XL*

NP = NUMBER OF LAYERS

Ø / Bar	4Bar	6Bar	8Bar	10Bar	12Bar	14Bar	16Bar
DN 300 - 12"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2
DN 350 - 14"	NB 1 NP 1	NB 1 NP 1	NB 1 NP 1	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2
DN 400 - 16"	NB 2 NP 1	NB 2 NP 1	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2	NB 3 NP 2	NB 5 NP 3
DN 450 - 18"	NB 2 NP 1	NB 2 NP 1	NB 4 NP 2	NB 4 NP 2	NB 4 NP 2	NB 6 NP 3	NB 6 NP 3
DN 500 - 20"	NB 2 NP 1	NB 4 NP 2	NB 4 NP 2	NB 4 NP 2	NB 7 NP 3	NB 7 NP 3	NB 7 NP 3
DN 550 - 22"	NB 2 NP 1	NB 5 NP 2	NB 5 NP 2	NB 5 NP 2	NB 7 NP 3	NB 7 NP 3	NB 9 NP 4
DN 600 - 24"	NB 3 NP 1	NB 5 NP 2	NB 5 NP 2	NB 8 NP 3	NB 8 NP 3	NB 8 NP 3	NB 10 NP 4
DN 700 - 26"	NB 3 NP 1	NB 6 NP 2	NB 6 NP 2	NB 8 NP 3	NB 8 NP 3	NB 11 NP 4	NB 11 NP 4
DN 750 - 28"	NB 3 NP 1	NB 6 NP 2	NB 6 NP 2	NB 6 NP 2	NB 9 NP 3	NB 12 NP 4	NB 12 NP 4
DN 800 - 30"	NB 6 NP 2	NB 6 NP 2	NB 10 NP 3	NB 10 NP 3	NB 13 NP 4	NB 13 NP 4	NB 16 NP 5
DN 900 - 36"	NB 8 NP 2	NB 8 NP 2	NB 12 NP 3	NB 15 NP 4	NB 15 NP 4	NB 19 NP 5	NB 19 NP 5
DN 1000 - 40"	NB 9 NP 2	NB 13 NP 3	NB 13 NP 3	NB 18 NP 4	NB 22 NP 5	NB 22 NP 5	NB 26 NP 6

Bande AC-MR by its manufacture and composition meets the requirements of the standards: **ISO 24.817 / ASME PCC-2**



YOVANN'S Co. HAS DEVELOPED ITS OWN SOFTWARE **L.C.S.**

FOR SIZING OF COMPOSITE MATERIAL FOR STRENGTHENING THE TYPE **B** DEFECTS:
DEFECT CROSSING THE WALL OR APPEARING INSIDE THE SUBSTRATE WHEN THE
REMAINING WALL THICKNESS AT END OF LIFE IS LESS THAN 1mm

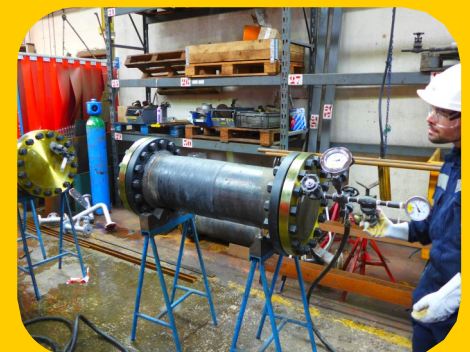
HYDRAULIC PRESSURE TEST **Bande AC-MR**[®]

FEBRUARY 2016 - ON SITE **Total PN**

SECTION Ø DN 300 - B16 ISO-PN50 WATER PRESSURE TESTS AT ROOM TEMPERATURE

HOLE Ø 11 mm - 1 LAYER OF **Bande AC-MR** (10cm x 500cm) code: 1005L

EACH LAP HAD A RECOVERY OF 50% ON THE PREVIOUS



RESULT

1. after 30 minutes of drying - 5 bar without leaking, oozing when pressurizing.
2. after 24 hours of drying - **NO LEAKAGE AFTER 24 HOURS ON LEVEL OF 10 BAR**

CONCLUSIONS

Performed tests confirm the following properties:

Good waterproofing (localized protection or ground crossing).

Additional mechanical resistance (line reinforcement).

Stopping external corrosion, particularly in the case of buried pipes.

Possible use in a damp dig or piping.

Allows to confirm the recommendations of the abacus N°2 and the spreadsheet for \leq DN300 cases and \leq 10 bar pressure.

Bande AC-MR is used by :



ExxonMobil



ARKEMA

petroineos
REFINING AND TRADING

lyondellbasell

Lubrizol



versalis

ArcelorMittal

PREVENTIVE REINFORCING

FUEL STORAGE TANK - Ø 10 M - H. 6 M - GRAVITY PRESSURE



IMPLEMENTATION ON THE BROKEN PIPE - CONTINUOUS FLOW OF WATER + VAPOR



PROTECTION OF A PARTIALLY BURIED SEWER VENT



LINE Ø 2" - Fluid : MEC - WALL THICKNESS LOSS (0.8 mm)



FLANGES PROTECTION - Ø 24" - JET FUEL - SP 5 BAR

