

**BAC**<sup>®</sup>

**CORROSION CONTROL**



**LAMINATED ZINC TAPE**  
**ISOZIN**

**Z**incTape<sup>®</sup>



# ISOZIN

## Corrosion control made easy using laminated zinc tape.

A Zinc Tape that provides a corrosion control solution to new and existing above ground plant and transport systems.

- Economical
- Easy to apply
- Long lasting
- Many applications
- Proven product

## THE PRODUCT

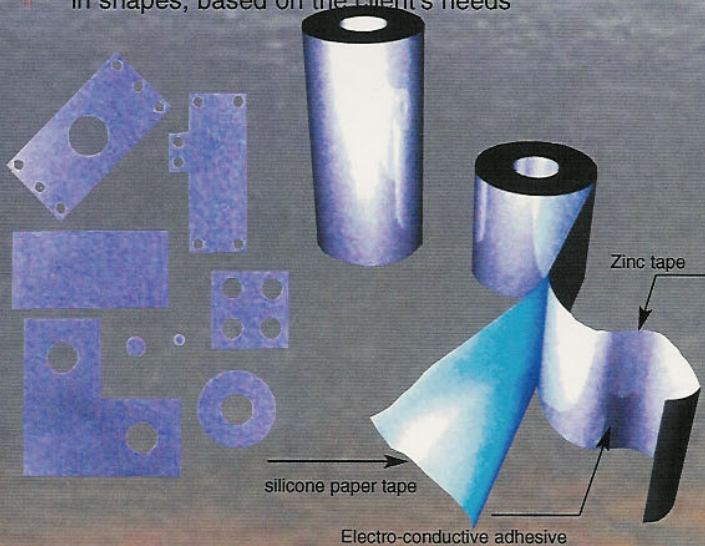
The product consists of a zinc-tape of high purity (99.99% of the chemical mass of zinc) with a nominal thickness of 0.080 mm.

This tape is supplied with an adhesive of a nominal thickness of 0.025 mm, which can resist continuous operating temperature of 80°C and which reacts under electro-conductive pressure.

The adhesive layer is covered by a silicone paper tape, which protects the band from getting damaged or polluted until the moment the tape is applied.

The product is available in two forms:

- on rolls, whose width and depth and length are shown in the table below
- in shapes, based on the client's needs



### Standard Tape Sizes

Width	10mm	15mm	20mm	25mm	30mm	35mm	40mm	50mm
Length	50 m	50 m	50 m	50 m	50 m	50 m	50 m	50 m

Width	70mm	80mm	90mm	100mm	150mm	200mm	300mm
Length	50 m	50 m	50 m	50 m	50 m	50 m	50 m

## TECHNICAL FEATURES

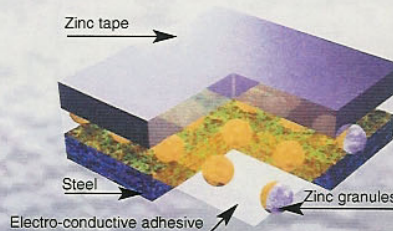
The product is designed to cover the surface of iron, steel, aluminium and light metals in order to protect them from corrosion.

This is achieved by putting our product in contact, through proper pressure, with the surface that needs to be protected from corrosion.

The adhesive coat, which is applied only on one side of the zinc tape, consists of a matrix of adhesive and a percentage of zinc powder.

Through the addition of zinc powder, we have achieved the most important effect, which is making the adhesive itself electro conductive.

This process allows the adhesive to create an electrical couple between the surface that needs to be protected and the zinc tape, so that the zinc can act as galvanic anode.



*The diagram on the left shows the application of our zinc tape on a steel surface. It can be seen that the thickness of the adhesive layer always remains the same and that the zinc granules are dispersed evenly throughout the adhesive layer.*

*These granules are necessary to enable the adhesive to be electro-conductive and to assure a continuous metallic contact between zinc and steel.*

As a consequence of the unique manufacturing process and the high purity of the employed zinc, the band has an absolutely homogeneous and isotopic microstructure, which cannot be found in other protection systems.

For this reason, the corrosion process is suppressed with no pitting or any form of local corrosive attack.

The main features are:

- stopping any direct corrosion;
- active anticorrosive protection thanks to the electrical contact between the surface to be protected and the zinc layer, which, in the presence of an electrolyte, reacts as a sacrificial anode;
- presence of an adhesive layer, anchored on the surface to be protected, which is an additional defense against corrosion,

the coating with a zinc layer assures cathodic protection of metallic surfaces for a time, that, in most cases, is equal or longer than the lifetime of the structure to be protected.



# THE PROCESS

## Use of zinc tape with electro-conductive adhesive

The point of contact between light alloys and iron materials can be subjected to corrosion. When these two materials get in both electrical and electrolytical contact, a galvanic process begins. The electrolytical contact arises when a solution (usually rain-water) seeps between the two surfaces.

This contact can even be caused by moisture between the two surfaces or by a chemical non-homogeneity of one of the two surfaces because of the presence of oxides, dirt, etc.

Since the electrochemical potentials of steel and iron materials are more electropositive than light alloys, they can cause corrosion. Therefore light alloys become the sacrificial anode.

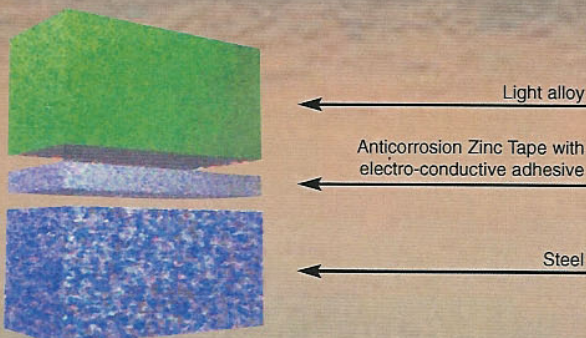
These problems can be avoided by means of insulating materials (generally made of plastic or gum), which can be put between the two surfaces, in order to break the electrical and electrolytical contact. But, since the insulating material does not adhere well and since it wears out quickly, protection against corrosion is no longer guaranteed. Such damage can even cause mechanical problems, such that the two surfaces are no longer connected correctly.

This will not happen when employing our zinc tape with electro-conductive adhesive.

Through our zinc coating in contact with iron surface, passive and active protection can be achieved:

- 1 **passive protection** due to the composition of the zinc coating and the adhesive, which adheres well avoiding any ingress.
- 2 **active protection** because the difference of potential between the two surfaces decreases. The potential of zinc is very similar to that of the light alloy and so the zinc tape acts as the sacrificial anode instead of the light alloy.

The zinc tape must be applied to the more noble metal. Should there be doubts concerning the electrolytical potentials of the materials, it is advisable to cover both the surfaces with the zinc tape, so that there can be no corrosion attacks.



# TYPICAL APPLICATIONS

## Use of zinc tape with electro-conductive adhesive against corrosion

### TRANSPORT



Application of zinc tape on Railway Carriage.

### INDUSTRIAL



Application of zinc tape on Fuel Tanks.

### PIPELINES



Application of zinc tape on above ground Pipeline.

### BRIDGES



Application of zinc tape on a Bridge Support.





## CORROSION CONTROL

# TECHNICAL DATA

Product Name: Isozin Laminated Zinc Tape

Composition	Weight g/m <sup>2</sup>	Thickness Micron $\mu$
Zinc band	560	80
Adhesive	50	25 min
Paper	90	75
<b>TOTAL</b>	<b>700</b>	<b>180</b>

Characteristics	Unit	Value
<b>Zinc band</b>		
Thickness	mm	0.080 $\pm$ 0.005
Weight in grams	g/m <sup>2</sup>	560 $\pm$ 150
Reinheit	%	99.99
<b>Adhesive</b>		
Thickness	mm	0.025 min
Weight in grams	g/m <sup>2</sup>	50 $\pm$ 10%
Adhesive on steel		
10 hours after application	N/cm	4 min
48 hours after application	N/cm	6.5 min
Shear resistance	Minutes	10 min
Electrical conductivity	$\Omega$ /cm <sup>2</sup>	10 max
Minimum temperature for application	$^{\circ}$ C	+ 10 max
Working temperature	$^{\circ}$ C	-10 $\pm$ 70
Maximum temperature for short period (1/2 hours)	$^{\circ}$ C	+ 100
<b>Paper</b>		
Weight in grams	g/m <sup>2</sup>	90 $\pm$ 5%
Thickness	mm	77 $\pm$ 5

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