



Export Packaging

Ambassador antalis **PACKAGING**

Packaging Materials
Packaging Systems
Packaging Solutions
Packaging Services

Better all around

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About Export Packaging

Why anti-corrosion protection?

At US \$2.2 trillion, the annual cost of corrosion worldwide is over 3% of the world's GDP. For Europe as a whole, the loss is estimated at over EUR 200 billion. The consequences of corrosion are not only high costs due to the need to rework or replace products, it can also cost the manufacturer its reputation.

And yet corrosion is perfectly avoidable! Protect your products properly against corrosion and avoid the irksome and costly consequences. Ambassador Antalis Packaging can give you all the help you need! Put your trust in our over 50 years of experience of corrosion protection packaging!

When is anti-corrosion packaging needed?

Anti-corrosion packaging is used in the following cases:

- Export of goods over long distances (especially by ship) and in / through different climate zones
- Long term storage of metal goods (e.g. spare parts)
- Metals that are sensitive for corrosion
- CKD shipment e.g. of cars
- Temporarily laying of machines, planes

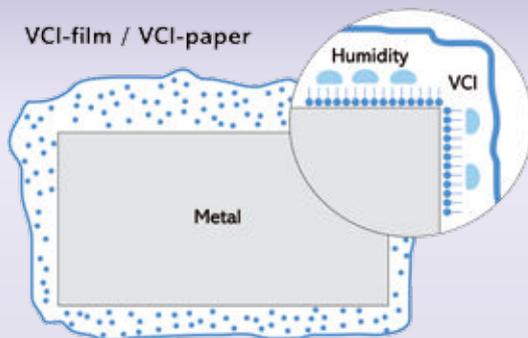
There are three methods for anti-corrosion packaging:

1. VCI papers and films
2. Aluminum barrier foil in combination with desiccants
3. Coating methods (oils or liquids)



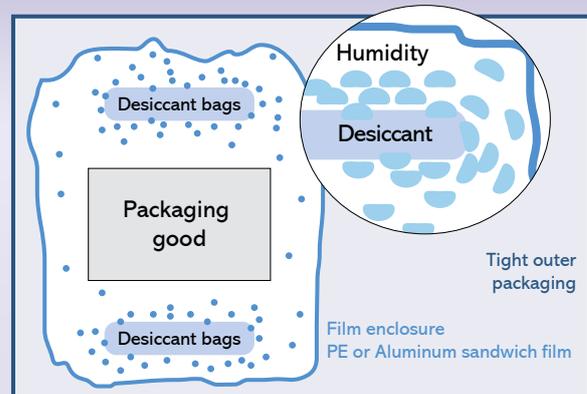
How does it work?

Volatile Corrosion Inhibitors



In a carrier material (for example paper or film) corrosion inhibitors are added during production, after which they continuously 'gas out'. In a closed package a VCI atmosphere is built up. The VCI molecules attach themselves to the metal surface and create a moisture resistant protective layer, so that moisture cannot react with the metal to corrode

Barrier foil and desiccants



The barrier foil forms a sealed outside packaging around the product. Air and inside moisture is captured inside the packaging. Desiccants bags placed inside the packaging absorb the humidity and avoid corrosion to appear.

Parameters that influence the time of protection

Volatile Corrosion Inhibitors

- Distance
- Carrier material (paper or film)
- Density of outer packaging
- Environment: Temperature and humidity, climatic zone
- Chemical form
- Ratio of active VCI substance to packaging volume
- Type of transport (land, air, sea)

Barrier foil and desiccants

- Density of outer packaging
- Amount of desiccants inside packaging
- Environment: Temperature and humidity
- Amount of moisture in packed goods and packaging material
- Type of transport (land, air, sea)

Volatile Corrosion Inhibitor Packaging

Advantages of VCI packaging

Time saving

- + Easy and quick to apply
- + Products can directly be used after unpacking

Low cost

- + Can combine packaging and anti-corrosion in one product (e.g. bags, boxes etc.).
- + No cleaning of (oiled) parts needed at destination
- + Suitable for small and large products

Save

- + Packaging must not be sealed and can be opened (e.g. at customs) which means better protection
- + Approved anti-corrosion method avoids damage costs

Environmental friendly

- + Materials can be recycled

VCI anti-corrosion packaging can be based on:



Cellulose: paper sheets or rolls, cardboard and VCI chips



Films: sheets, rolls, hoods, bubble wrap, stretch film



Liquids: corrosion protection oils and water soluble corrosion protection

Comparing VCI paper and film

VCI paper

- Saturation of VCI inside packaging reached within ca. 15 minutes (non-ferrous metals after 24 hours)
- Protection duration up to 3 years (BRANOROST)
- Convertible to sheets, rolls, chips

VCI film

- Saturation of VCI inside packaging reached up to 20 h max. depending on packaging volume.
- Protection duration up to one year (BRANOFOL)
- Transparent
- Convertible to hoods, bags, sheets, rolls

The material of polyethylene (film) is less suitable to absorb large volumes of VCI concentrate than paper. We therefore recommend, where suitable, to add VCI paper or emitters, like e.g. chips, to the packaging to ensure an adequate VCI atmosphere.

Application examples

VCI paper



Single parts wrapped in VCI paper



Combination of VCI paper and aluminum barrier film for long term storage



Automatic wrapping with VCI paper



VCI paper box lining for bulk goods



VCI paper as interleaving paper



Pumps prepared for export in box with VCI paper lining

VCI film



VCI film for small load carriers



Gusseted VCI film bag for standard boxes combined with VCI chip and additional VCI depot



VCI film reel for interleaving



VCI bag for single part packaging



VCI export packaging for crankcase



Bearings packed in VCI film

Barrier foil & desiccants

Goods vulnerable to corrosion need to be protected by a reliable form of packaging if they are supposed to be transported over the sea or to polar or tropical regions, or to be stored for long-term periods (more than 1 year). The all-weather packaging consists of a water-vapour resistant barrier equipped with a considerable quantity of drying agent as to the climatic zone

Advantages of barrier foil and desiccants:

- Approved method for export packaging
- DIN / TL Standard
- Corrosion protection up to 5 years possible
- Clean packaging, no oil needed
- can be used to pack all kinds of material

Barrier foil can be based on:

- Aluminum barrier film
- 300 µm LDPE film
- 200 µm LDPE TL film
- Valéron or Valcross

And can be converted to

- Rolls
- Sheets
- Hoods
- Bags

Desiccants can be based on:

- Clay
- Zeolithe
- Silical gel



How to build export packaging



1 Usually a wooden pallet is used as a base, which is covered with a base sheet made from film. The packaged goods are then secured onto the pallet with locking screws.

2 As a second step, sharp corners and edges of the product are cushioned with standard packaging foam in order to prevent a subsequent ripping of the film.

3 The BRANOGEL desiccant bags are then placed in the packaging. They later absorb the remaining moisture. With the help of moisture indicators, the air moisture within the packaging can be controlled.

4 Now the second part of the film packaging is welded onto the base sheet. Before definitive sealing, the air is removed from the packaging along with most of the remaining moisture. The film hermetically protects the packaged goods from the outside air.

5 Finally, a wooden crate is usually placed around the packaged goods in order to protect the valuable product against external influences, such as collisions.

Application examples



Heat shrinkable film 200 µm



Warm-water boiler



Wrapping a helicopter with aluminum barrier foil



Wrapping with aluminum barrier foil - aircraft



Placing of desiccant bags inside the packaging



Sealing the aluminum barrier foil

Packaging Material and services

Ambassador Antalis Packaging is offering you not only material for export packaging, but also additional services. This makes us your one stop shop for export packaging.



Packaging Material

Ambassador Antalis Packaging offers an extensive range of packaging material, machines, solutions and services. This includes all products needed for export packaging.

- Papers and boards
- Filling and cushioning materials
- Cartons, containers, pallets
- Adhesive tapes and glue
- Standard packaging materials
- Films
- Strapping and stapling
- Packaging machines
- Bags and sacks
- Food packaging
- Corrosion protection
- Bespoke packaging



Converting

Our in-house converting departments can customize products like paper, cardboard, bubble foil, foam PE foil, and especially with aluminium barrier materials with different combinations of LDPE, HDPE, PET, PA.

The service covers:

- paper cutting for different widths
- rewinding and cutting of paper sheets
- sealing of bags of different sizes and from various material
- manufacture of large bags



Mobile workplace

With our team of packaging specialist we can come to your place to build up export packaging especially for large and / or heavy products. So we cover the whole process: design of the export packaging solution, supplying and converting all packaging materials needed, preparation of export packaging in your warehouse.



Laboratory

Confidence is good – control is better! That is why our packaging testing laboratory will test your packaging for you according to official standards. The list of the laboratory's services ranges from grammage to elaborate transport simulations. With the new VÖTSCH climatic test chamber, climate and transport simulations can also be performed in order to check corrosion protection at temperatures of between -40 °C and 180 °C and relative air moisture of up to 98%.



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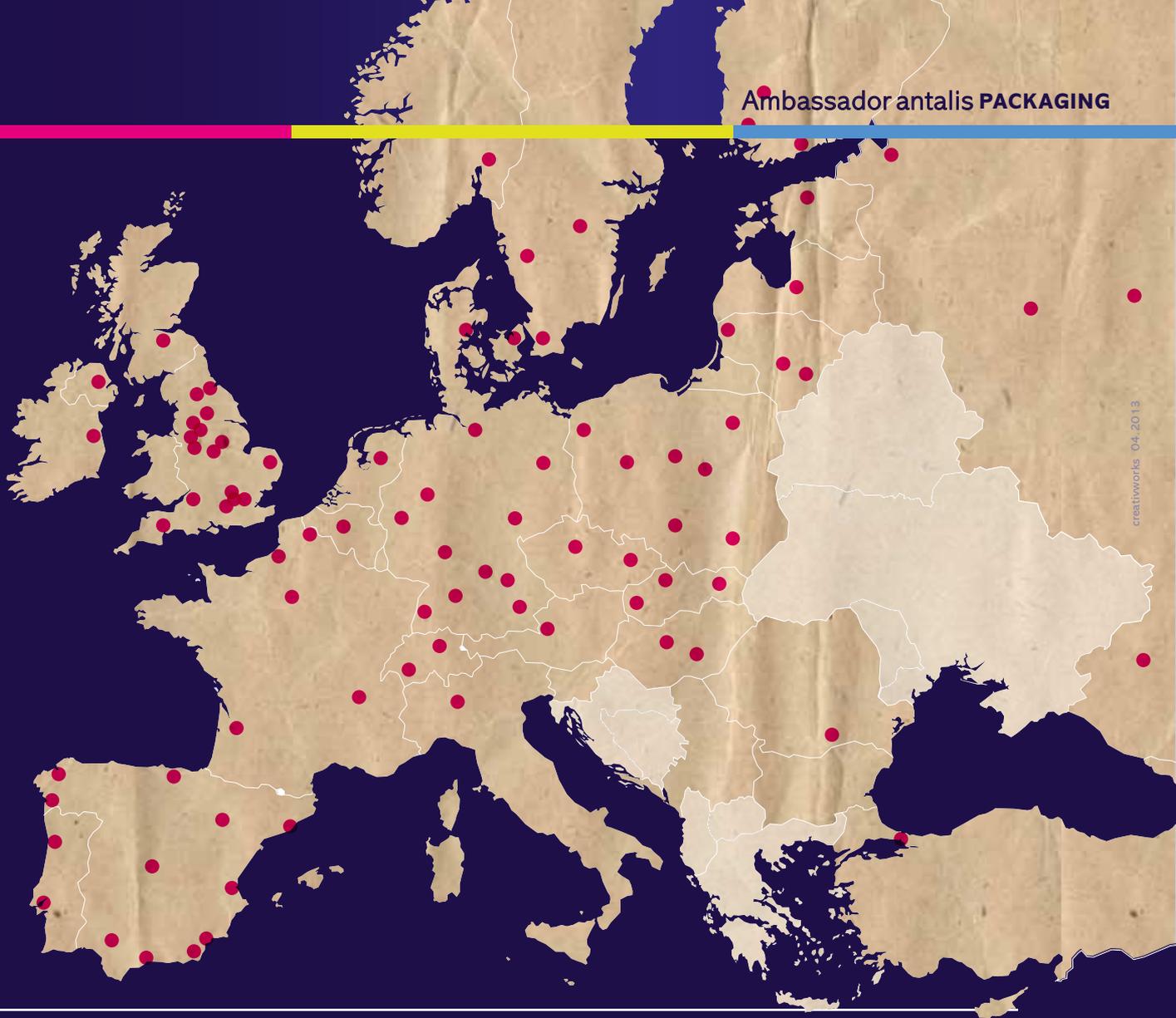
Corrosion has many different causes, not all of which are easy to pinpoint. The culprit can even be a small defect in the production process. We offer you the possibility of auditing and certifying the procedures of your entire packaging process with regard to VCI corrosion protection applications. With this certification, you can rest assured that your VCI packaging concepts are correctly applied!



Training

We want to share our comprehensive packaging know-how and therefore offer training courses on the theme of « right packaging » and « corrosion protection according to the VCI method ».

If interested, do not hesitate to get in touch with us.



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Your one stop shop for packaging all over Europe Ambassador Antalis Packaging - better all around

UK

Ambassador Antalis Packaging

41 Road One
Winsford Industrial Estate
Winsford
Cheshire
CW7 3QB

Tel: 0870 241 1466

Fax: 0870 60 99 889

ambassador@ambassador-antalis.co.uk

1 Tara Street
Hilltop Industrial Estate
Bardon
Coalville
Leicestershire
LE67 1TW

Tel: 0870 241 1466

Fax: 0870 607 3144

pkteam@ambassador-antalis.co.uk