

Analysis

Project

Production

 **Division of
Industrial Export
Packaging**

Guarantee

Transport

Packaging

CUSTOM EXPORT AND OVERSEAS PACKAGING

Years of experience in the field of packaging materials and packaging solutions allow us to offer customers a comprehensive service also in the demanding areas such as export and overseas packaging. With flexible project management and individual approach to customers' requirements, we are able to comprehensively solve

Art of
packaging...



the issue of packaging and subsequent transport even in the most demanding conditions. Our designed and manufactured packaging protects products against adverse influences such as corrosion, shocks, careless handling, climatic conditions, dust, etc., and not only during transport, but also in the case of long-term storage.

Art of
packaging...

Export packaging design process

Due to the wide variety of orders we receive, each project requires an individual approach. We take into account all specifications of the packaged item, the mode of transport and any other specific customer requirements.

The export packaging process itself, supported by a trained team of specialists, consists of a number of steps:

1. **Initial analysis** that considers and analyses all customer requirements, determining the fundamental parameters of the product to be transported and taking into account possible risks. The analysis must also include information on the transport chain, the duration and the storage conditions at the destination, possible multiple use of packaging, etc.
2. Data from the initial analysis form a basis for a **project developed** in cooperation with experts, which includes an accurate packaging design and description of the packaging process and transport.
3. Different **parts of the packaging are produced** according to the project.
4. **The product is professionally packed** exactly in accordance with the developed procedure to be protected against weathering and mechanical damage during transport.
5. The packaged **product is loaded and transported** to the place of destination. This step is implemented in collaboration with trusted business partners.
6. **Warranties and guarantees** are provided as standard.

The entire process takes place in accordance with the standards and regulations applied to packing and transportation (ČSN, HPE, IATA, ISPM 15 etc.).



Materials used

Export packaging combines a number of materials, all of which help to protect the transported product from certain negative effects. An appropriate combination of these materials is therefore required to ensure maximum product protection during transport.

- **Fully jacketed wooden box** made of wood planed boards, plywood or OSB oriented chipboard. This type of box is used for packing standard machinery, machine parts, and equipment sensitive to mechanical damage, at the risk of theft or loss. The weight of the goods transported in these boxes can be up to several tens of tonnes.
- **Crates** are a simpler and cheaper alternative to fully sheathed boxes. They are used for less demanding transport or transportation of products that need less protection.
- **Wooden transport fixtures** (seatings, saddle cradles, slides, racks, etc.) are used for transporting bulky items not packed in boxes. They mainly serve to secure the position of the products during transport, to attach products to containers, pallets, boats etc., and to create handling units within the shipment.
- **Wooden pallets** are one of the cheapest packages that enable the creation of a product handling unit. They are indispensable for transporting large products for which boxes are inappropriate (in terms of increase in transport dimensions). An excellent application of pallet is in combination with heat-shrinkable films e.g. MilCorr®.
- **Metal frames** are used for fixing and anchoring very heavy objects, when the wood frame is no longer sufficient.





- **VpCI® foils** provide universal, easy-application long-term corrosion protection of packaged items. They are also used to prevent moisture and dust from penetrating boxes and wrapped items. VpCI® foils can take the form of classic (PE), heat shrink or bubble foils. These foils also protect the product against scratches.

- **Special MilCorr® foils** are suitable for transportation and long-term storage and can also replace transport crates. MilCorr® foils won the award "Package of the Year 2014".



- **Barrier foil**, together with desiccants, is used as an airtight container to prevent environmental damage to the product.

- **Preservative anti-corrosion agents VpCI®** are used for long-term surface protection or for the protection of surfaces in extreme transport conditions. The corrosion inhibitors contained therein also protect the surface against possible minor damage of preservative coating.



- **Desiccants** are used to reduce the humidity inside the package, where desirable. The most effective use is in combination with barrier foils, which have very low vapour permeability.

- **Tie ribbons and strapping systems** fix the products inside or outside the package against mutual shift during handling and transport. They can also be used as anchoring elements in the transport of platforms and means of transportation.

Services

In addition to export packaging, we also offer other related services covering the whole range of industrial packaging:

Transport

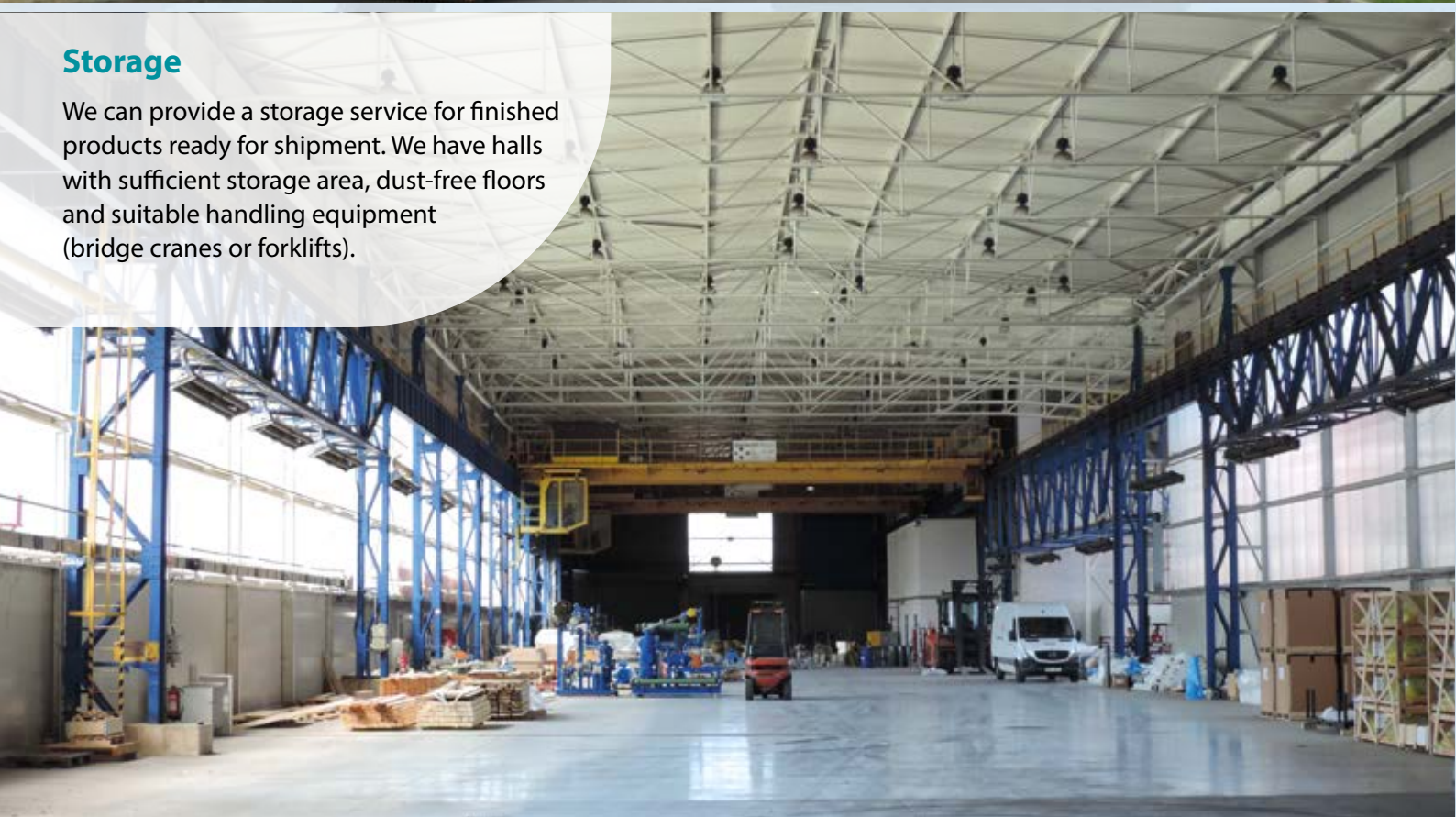
High-quality, reliable, safe transportation is a central feature of the services included in the export package. So as to maintain the highest standards of service, we work with trusted partners, with whom we can ship any object or technological unit to anywhere in the world. We ensure reliable road, rail, sea and air transport, including oversized or otherwise non-standard loads.

Our service offer includes all administrative formalities related to customs clearance for the transported goods.



Storage

We can provide a storage service for finished products ready for shipment. We have halls with sufficient storage area, dust-free floors and suitable handling equipment (bridge cranes or forklifts).



Export and overseas packaging is part of our range of services. For our partners, we also provide the manufacture and supply of conventional and atypical

packaging materials for packaging of serial production, pallets, etc. We have the most comprehensive range on the Czech and Slovak markets.



Loading, unloading and handling of heavy and oversize loads

We can provide technology and skilled staff for loading of trucks, containers or wagons. We also offer our customers a handling service for oversize loads. Our forklift (FL) with a load capacity of 16t can be delivered directly to the required location where the handling will take place. If necessary, we can also provide a mobile crane with a capacity of 100 tons.

Education

We organize professional training and conferences, through which we pass on our experience in various fields of industrial packaging to our corporate clients, and acquaint them with the latest trends and illustrative case studies. Our clients can use this new knowledge and information to better understand issues related to packaging, and thus optimize cost-efficiency of not just their packaging, but often the entire logistics process.



Záhradníkom je potenciál

Tvorba kationů	Standard. potenciál (V)	Korozi. odolnost*
Pt → Pt ²⁺	+1,60	Pt
Au → Au ³⁺	+1,38	Au
Ag → Ag	+0,81	Zr
Cu → Cu ²⁺	+0,35	Ti
Pb → Pb ²⁺	-0,13	Ag
Su → Su ²⁺	-0,16	Cr
Ni → Ni ²⁺	-0,25	Cu
Cd → Cd ²⁺	-0,40	Ni
Fe → Fe ²⁺	-0,44	Pb
Cr → Cr ³⁺	-0,51	Al
Zn → Zn ²⁺	-0,76	Su
Mn → Mn ²⁺	-1,10	Fe
Zr → Zr ⁴⁺	-1,53	Co
Ti → Ti ²⁺	-1,63	Zn
Al → Al ³⁺	-1,69	Mg
Mg → Mg ²⁺	-2,40	Mn

2Cl⁻ = Cl₂ + 2e⁻ +1,36 V

2H₂O = O₂ + 4H⁺ + 4e⁻ +1,23 V

HNO₃ + H₂O = NO₂ + 3H⁺ + 2e⁻ +0,94 V

Fe³⁺ = Fe²⁺ + e⁻ +0,77 V

4OH⁻ = O₂ + 2H₂O + 4e⁻ +0,40 V

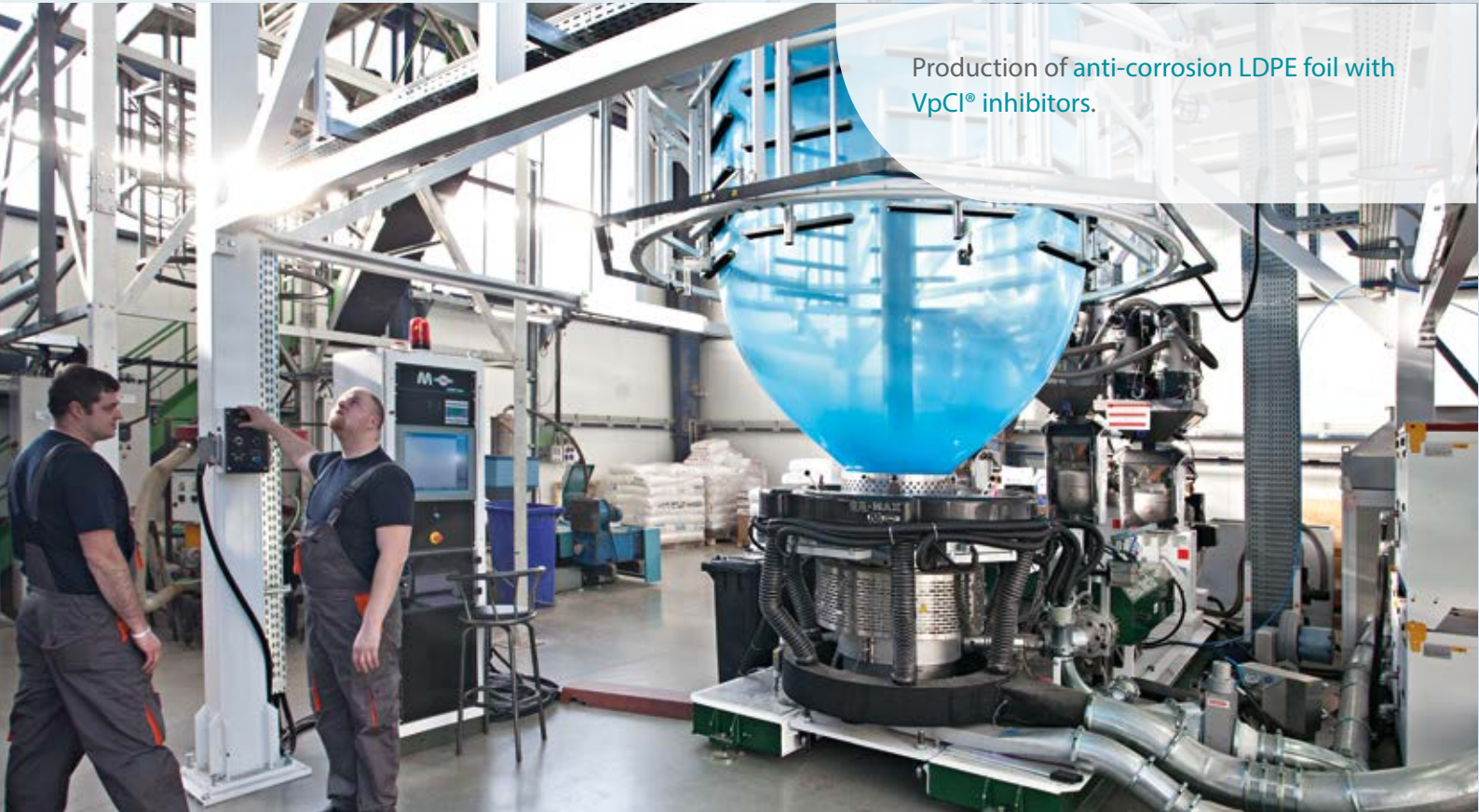
H₂ = 2H⁺ + 2e⁻ 0,00 V

$w = n \cdot F \cdot E$

$E_r = E^0 + \frac{RT}{nF} \ln \frac{a_{M^+}}{a_{X^-}}$

We can pack...

Production of anti-corrosion LDPE foil with VpCl® inhibitors.



Manufacturing of wooden containers on a large format sawmill.





Plywood crates of various sizes with signage as well as with impact and tip indicators.



Aggregate placed on a wooden floor with supports, wrapped in shrunked MilCorr® VpCl® barrier film.



We can pack...

Rescue boat wrapped in **MilCorr® VpCI®** barrier film for towing transport.



Isothermal cabinet placed on wooden floor and wrapped in **MilCorr® VpCI®** barrier film.





Combat vehicles wrapped in MilCorr® VpCl® barrier film. The wrapped vehicles were also mobile / able to board the low loader.



Part of a turbine wrapped in barrier anti-corrosion foil and covered with a laminated foil. The product is designed for marine containers.



We can pack...



Heat-shrinkable PE foil packaging on a pallet. Inexpensive, simple and efficient packaging suitable for large products conveyed by conventional or marine transportation.

Wagon for inter-operational transport wrapped in MilCorr® VpCl® shrink barrier film. The unit stays mobile even after being packed.





Plywood crate for a large product, loaded and fixed on FlatRack container.



Combat helicopter wrapped in MilCorr® foil with UV stabilization for 5 years when stored outdoors.



We can pack...

Packaging of a large product in a crate made of OSB boards. In addition, the product is wrapped in a barrier film.



Fixing wooden boxes in a container using straps and air bags.





Crate boxes (lathing) made of lumber treated according to ISPM.



Dismantled plywood boxes ready to be packed.

We can pack...

The process of packing a sport aircraft. The aircraft is protected by **anti-corrosion foil**, fixed to **the wooden floor** and sheathed by a plywood crate.



Folding **KLAPPY BOX** plywood crate for multiple use.





The process of packing a technological unit in MilCorr® foil and a wooden crate.



Box made of OSB with a packed technological unit fixed to a trailer.



References

BOSCH REXROTH

ZVU POTEZ

DURA AUTOMOTIVE SYSTEMS

BIS CZECH

VISTEON

WALTER

DOOSAN ŠKODA POWER

ŠKODA TRANSPORTATION

SIEMENS

EKOL

THE CZECH ARMY

... and many others

Certification and guarantees

All company activities are subject to strict audits carried out by a reputable company, TÜV Germany, on the basis of quality management certificate according to ČSN EN ISO 9001:2009 and environmental management certificate according to ČSN EN ISO 14001:2005, acquired by the TART company. Upgrade of these systems is the process of quality control of products and services, so-called T-KVALITA, developed by TART according to the principles defined in the Total Quality Management (TQM) system.

Furthermore, we are certified according to international directive FOA ISPM 15 - rules for wood packaging material in the international trade.

The quality management process T-KVALITA then guarantees further associated norms and standards of the European Union related to the production of packaging and transport of goods, such as ROHS, REACH etc.

All export packaging orders undertaken by TART are insured against all and any possible risks that may occur during transport.

TART's goal is to provide clients with a professional, reliable, comprehensive and above all secure service that will fulfil even the most demanding requirements.



Other divisions

Division of Packaging Materials

The packaging materials division manufactures and supplies a wide range of packaging products of different materials and for different uses. We keep more than a thousand items in stock.



Division of Packaging Machinery

The purpose of the packaging machine division is to meet the specific requirements of customers, which is achieved by providing a comprehensive range of stretch wrapping, strapping, carton sealing, foiling and welding machines and complete packaging lines.



Division of Cortec Anticorrosion System

The anti-corrosion materials division provides, under license from multinational company Cortec, innovative corrosion protection solutions for mechanical engineering, power engineering and the petrochemical industry, metal processing industry, telecommunications, electronics, construction, automotive and various other industries.



Division of Packaging Solutions

The most complex packaging solutions are implemented within the framework of the complex packaging division. Our staff successfully fulfil the demanding requirements of consumer, group and transport packaging of products using returnable and non-returnable packaging. The priority fields for complex packaging include the automotive industry, mechanical engineering, electronics and logistics centres.



Division of Envira Biodegradable Packaging

Envira® compostable packaging helps to protect nature and the environment. This packaging is made from natural materials (corn, soy), and after its service life it can be fully composted.



Division of Sunflex Thermoreflective Foils

SUNFLEX® thermal reflective construction foils are an excellent complement to conventional thermal insulation systems for buildings. They contribute significantly to reducing heat loss in winter and increasing comfort during the summer.





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