



VALENO® hard plastics

EXCOR® VALENO® hard plastics based on polyolefins combine the established anti-corrosion effect of EXCOR® with the positive properties of the tool holders and stacking containers that are popular in the design packaging sector.

Workpiece holders, small load carriers, and double-wall sheets accommodate production parts that require very precise transport – a basic prerequisite for automated transport and storage processes in logistics. By combining dry, temporary corrosion protection using the VCI method of EXCOR® with load carriers and containers (which are covered in part by country-specific standards), the user does not need to take any additional anti-corrosion measures.

The clean metallic production parts are placed in the load carriers in such a way that the corrosion inhibitors integrated into the plastic of the holders have the greatest possible freedom of access to the metal surfaces. The container is sealed with a lid or by the stack. In the sealed space, the corrosion inhibitors are distributed evenly and deposited as an anti-corrosion film on the metal surface (adsorption). The corrosion protection works both in direct contact and as a gas via the vapor phase.

When the VALENO® packaging is opened, the protective film evaporates from the metal surface within 1 to 2 hours without any residue. The packed goods can be used without further processing.

ADVANTAGES

corrosion protection is an integral part of the packaging

extremely robust, abrasion-resistant

integrated corrosion protection effective for up to 5 years

cost-efficient over its lifetime

no danger from skin contact or inhalation if used properly

EXCOR®: The corrosion protection that comes from the packaging!

Protective effect*

Type E: steel, cast steel, partly galvanized steel, Cr, Al 4xxx (Si > 7%), cast iron

Type MM: steel, galvanized and tin-plated steel, Cu, brass, aluminum 2xxx (Cu), Al 4xxx (Si > 7%), 5xxx (Mg), 6xxx (Mg, Si), 7xxx (Zn), other Al alloys on request, combinations of the above metals

Type A: steel, galvanized steel, Cu, brass, aluminum 2xxx (Cu), Mg alloys possible, cast iron

* For metal parts with unusual surface finishes, e.g. very rough surfaces or adhesive residues from processing agents, it is advisable to carry out tests using model packaging in a climate that simulates actual conditions before using EXCOR® VCI materials on a large scale. Climate test cabinets and chambers (up to a volume of 16 m³) are available for this purpose at EXCOR® Korrosionsforschung GmbH in Dresden.

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Technical data

Brief description	EXCOR® VALENO® hard plastics are made from polyethylene and polypropylene and have VCI active ingredients and contact inhibitors integrated into the polymer matrix.
Development phase of the active ingredient	Approx. 1 hour at a temperature of 20 °C. The closer the manufactured part to be protected is to the VCI-releasing plastic, the shorter the development phase.
Effective period	Up to 5 years from production if application instructions are observed. If the application instructions and specific logistical and technical packaging requirements are observed, long-term corrosion protection of up to 15 years is possible.
Dosage	1 m ² of hard plastic can protect up to 10 m ² of metal surface. As factors such as logistics processes, packaging design, and pre-treatment of the parts that require protection can influence the dose, technical coordination may be necessary. Our application engineers will be happy to advise you.
Cleaning	Dirt and deposits should be removed with a dry cloth. Vacuuming or blowing off is possible. Avoid wet cleaning if possible, as the moisture in the cleaning process reduces the effective period. After a wet cleaning process, blow off the containers with compressed air and allow to dry well. If any other cleaning processes are required, experiments with sample containers are necessary to determine the effect of the cleaning process on the reservoir of corrosion inhibitors.
Handling regulations for empties/storage	<ul style="list-style-type: none">- Storage inside buildings in stacked form, at temperatures < 30 °C.- Prevent moisture from entering.- Avoid direct sunlight over extended periods of time.
Handling regulations for loading/transport	<ul style="list-style-type: none">- The parts to be accommodated should be approximately the same temperature as the ambient air when packed.- The metal parts should be protected from corrosion-promoting perspiration during handling by wearing protective gloves.- The packing process should be carried out in an atmosphere that is as free from contamination as possible.- The final layer of a stack must be tightly sealed with a lid.- During transport, it is advisable to band the entire load unit so that a tight seal between the individually stacked boxes and the lid is guaranteed.- If the stacking does not provide a tight seal, the load units must be secured additionally with stretch film.

Quality assurance



For each production run of VCI packaging, EXCOR® checks representative samples for the content of corrosion inhibitors. The emission rate of the VCI components is checked by sampling. TÜV Süd certifies the testing, measurement methods, and QM processes used.

Monitoring of the VCI performance during the fifteen-year lifetime:

EXCOR® offers analytical testing of the products by sampling in order to assess the anti-corrosion performance over the useful life of the product.

Delivery forms

- Small load carriers
- Large load carriers
- Workpiece holders, trays
- Injection molded or deep drawn parts
- ESD properties possible
- Solid sheets
- Multi-wall composite sheets

Disposal

Can be recycled for materials or energy in accordance with local regulations. Observe safety datasheet.

Health

Classification not required under 1272/2008/EC (CLP Regulation on Classification, Labelling and Packaging of Substances and Mixtures).

No risk to the skin in dermatological testing.

No monitoring required under TRGS 615 and TRGS 900.

Contact us at:



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