

## KORING 501 and KORING 505 Vapor Volatile Corrosion Inhibitors (VCI, VPCI)

### General:

Vapor volatile corrosion inhibitors KORING 501 and 505 are white or slightly yellowish crystalline organic products. They are well soluble in water or in ethanol, or both.

Instead of "classic" anticorrosion products they don't create thick layer as oils, waxes, and lacquers make. They form micron protective layers that aren't sticky and simultaneously their advantage is suitability for long term evaporation, and from this reason long term anticorrosion protection. Vapors of these inhibitors fulfill the whole space where is merchandize packed. That's why there isn't any necessity for direct contact between protected surface and solid or liquid inhibitor. Nevertheless they act as anticorrosion treatment equally when direct contact is. Advantage of this principle is that parts of merchandize in direct contact with these inhibitors are protected immediately and parts where isn't able to transport corrosion inhibitor directly, as negligible gaps and pockets, and joints of pipes are, are protected by evaporating function of these inhibitors. Where "classic" anticorrosion "oils" aren't able to penetrate into spaces by this way these spaces are protected.

The difference between both inhibitors is, KORING 501 is designed for protection of steel alloys and protection of another metals isn't so strong. KORING 505 is designed for protection non-ferrous metals and steels equally.

Indicative protection period in months is given below.

**Table 01 – Indicative protection period of corrosion inhibitors KORING with respect to storage conditions**

Product	months, storage conditions, type of packaging					
	Free Atmosphere		Storage Shelter		Non-conditioned Warehouse	
	Packaging V	Packaging P	Packaging V	Packaging P	Packaging V	Packaging P
KORING 501	9	12	12	36	24	36
KORING 505	6	9	9	24	18	36

Description: Packaging V – Waterproof packaging permeable for water vapors.

Packaging P – Water tight packaging, impermeable for water and water vapors.

### Application Methods:

Vapor volatile corrosion inhibitors KORING 501 and KORING 505 assure corrosion protection 1 g for 3-4 liters of packaging space volume. They should be applied by filling in crystalline form, or dusting of powder form, surface spraying by inhibitor solution, or merchandize dipping into solution. Very frequent method is saturating packaging material as paper is by inhibitor.

Important is, after inhibitor application, fast drying in a case of solutions add-ons, and in powder application to hold treated merchandize 20 hours by 20°C because of vapors filling the whole packaging space.

### Application Examples:

Protection of metal processing merchandizes, electric apparatuses, automotive parts and car bodies, etc. Both inhibitors should be used as inter-operative protection, and final expedition protection, including see transportation.

Merchandize packed in boxes or bags is protected by adding into packaging/case counted amount of inhibitor with respect of packaging volume. The same is in a case of any pipes or pipelines if open ends are somehow blended. Another frequent application is protection of shut down turbines. Or protection of big storage tanks and dry metal reservoirs.

Small metallic parts packed in boxes or plastic bags is possible to protect by application of packaging paper saturated by inhibitors KORING 501 or KORING 505 or by adding vapor permeable small bags with anyone from both inhibitors in powder form.

### Advantages:

Non sticky surface; negligible layer on treated protected surface; vapors are able to protect and to penetrate into gaps where liquids haven't any chance; lower consumption; easy removing from treated surface when it is required; biodegradable, eco friendly by European laws; non carcinogenic.

### Packaging:

Both inhibitors are packed in 25 kg PE bags, or in 3; 5; 10 kg buckets. Another type of packaging depends on agreement with customer.

### Storage/shelf life:

Is for both inhibitors 24 months in original packaging by temperatures 5-30°C, with exclusion direct sun and UV light.