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## Description

**Borchi<sup>®</sup> OXY - Coat** is a revolutionary metal-based catalyst which demonstrates excellent performance at low use levels. In direct comparison to cobalt based driers improvements are noted in respect of drying activity, colour performance, gloss and haze. Excellent results can be achieved under adverse conditions. In general **Borchi<sup>®</sup> OXY - Coat** out performs Cobalt based driers.

**Borchi<sup>®</sup> OXY - Coat** defines innovation. The technology provides the solution for those in the coatings industry looking to break new ground.

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## Characteristic data

Appearance:	clear, yellow liquid	
Metal content, Fe:	800 – 1000 ppm	ICP
Viscosity (20 °C):	max. 200 mPa·s (typical)	ISO 3219 (A) - 1994
Density (20 °C):	approx. 1.04 g/cm <sup>3</sup> (typical)	DIN 51757 (A) - 1994
Solvent:	1,2-propylene glycol	

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## Properties

**Borchi<sup>®</sup> OXY - Coat** is based on a unique, patented highly active iron complex. It is supplied as a 1% solution of the complex in 1,2-propylene glycol. This makes it suitable for use in both solvent and water based systems.

For those who wish to calculate the metal level as a % of resin solids, it should be noted that the product contains 1% of the complex which corresponds to 0.09% of Iron metal.

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## Applications

**Borchi<sup>®</sup> OXY - Coat** can be used in all coatings which dry by oxidation, e.g. Alkyd, vegetable oils, epoxy esters, polybutadiene etc.

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## Addition

The starting concentration depends on the type of binder and pigment/extender loading. As a guide we would recommend starting at 0.7% of the **Borchi<sup>®</sup> OXY - Coat** as supplied on resin solids. This is equivalent to 0.0006% Fe metal on resin solids (6ppm of Fe), without any secondary or auxiliary driers.

Like cobalt, if the loading is too high then the surface dries too quickly and poor overall performance is seen, and if too low the drying is too slow. It may be necessary to conduct a study using a range of concentrations both above and below the suggested starting point to determine the best performance.

A common mistake is to underestimate the activity of the catalyst and use too high a level.



An alternative approach is to use the same weight of **Borchi® OXY - Coat** as the weight of 10% Cobalt drier that would normally be used to dry the formulation as a start point. Thus the level of iron used will be ~100<sup>th</sup> the level of cobalt normally used. This illustrates the exceptional activity of **Borchi® OXY - Coat**.

In our experience water based alkyds and short/medium oil alkyds give good results with **Borchi® OXY - Coat** alone once the use level has been optimised to give an acceptable drying time.

Long oil alkyds and oil rich systems such as wood stains may require the use of secondary driers.

For heavily extended and/or pigmented systems it is important to ensure that the surface of the pigment/extender is thoroughly wetted and stabilised. This can be achieved using either a secondary drier such as neutral calcium or by treatment with a wetting and dispersion agent such as 1% of **Borchi® Gen 0650**, **WNS** or **DFN**. Note this should be achieved before the addition of **Borchi® OXY - Coat**.

To prevent skinning a combination of **Borchi® Nox M2** (methylethyl ketoxime) and one of our **Ascinin® Anti Skin** range (non-oxime) is recommended. A combination of both is needed because **Borchi® Nox M2** is unable to function by complexing with the iron complex in **Borchi® OXY - Coat** as it does when it used with cobalt. Therefore a stronger antioxidant like our **Ascinin® Anti Skin 0444** or **0445** is necessary. But some **Borchi® Nox M2** is needed to fill the headspace of the drum / can because **Ascinin® Anti Skin** is not as volatile as **Borchi® Nox M2**.

We recommend a combination of 0.2% **Borchi® Nox M2** and 0.2% **Ascinin® Anti Skin**.

The amount of 0.2% **Ascinin® Anti Skin** should not be exceeded. Higher amounts could lead to drying retardation.

## Storage

Protect from the effects of weathering and store at temperatures between 5 and 30 °C.  
Once opened, containers should be resealed immediately after each removal of the product.

## Safety

Please refer to our safety data sheet for information relating to product safety.

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