



**ADDAPT**  
*Chemicals BV*



for tomorrow's  
Technology

# **Veopox™**

## Hybrid Adhesion Promoter



for tomorrow's  
World

# Introduction

The everlasting/ongoing search for higher performance coatings and the increasing need to cover a wide variety of substrates for protective and/or aesthetic reasons, has resulted in a myriad of oligomer/polymer systems.

Existing systems based on conventional polymer systems have however shown their limitations and shortcomings. In attempts to think outside the box, polymer developers have started to combine different polymer technologies looking for the desired synergistic effects. This novel class of hybrid polymer technology enables formulators to develop new higher performance systems. Hybrid polymers are prepared by bringing together different polymer functionalities in an attempt to create polymers with beneficial properties of the combined chemistries.

## For example:

Epoxy	adhesion, corrosion protection, toughness, solvent resistance
Alkyd	self-priming, air drying/cross linkable, solvent and chemical resistance
Acrylic	hardness, gloss, weatherability, fast dry/tack-free, crosslink ability

Physical blends have already shown their limitations, often resulting in incompatible systems, making the synthetic route via chemical reaction the method of choice and bringing the best qualities of each polymer to the coating. One application area still offering new opportunities are novel systems for metal protection.

Especially water-based systems have gone through a major evolution, the EEC VOC directive being the main driving force, but several areas still need improvements to match solvent-based systems. Water-based systems still hold a small share of the anticorrosive market but the AGR is far larger than for conventional systems. Other systems having their niche in this market are solvent-free and UV-curable systems.

Very often these light-, mid- and heavy-duty protective coatings are applied as multi-coat systems comprised of several layers. Nowadays, mono-coat systems have found inroads in an attempt to save both application steps and raw materials resulting in so called Direct To Metal (DTM) systems. DTM systems, however, do not yet display the desired properties required for heavy duty systems thereby limiting them to lighter duty systems. Often a top coat is applied also for aesthetic reasons.

## The VeoPox™ approach

The ADDAPT VeoPox™ range are designed as novel adhesion promoters for those formulators or resin manufacturers developing DTM systems for light-, mid- and heavy-duty systems.

VeoPox™ systems are chemical hybrid systems based on combinations of Epoxy, Fatty Acid and (Meth)acrylates using VeoVa™ 10 as a reactive diluent.

ADDAPT VeoPox™ can be used as additives giving excellent adhesion and corrosion protection in systems like:

- Solvent-based systems/High solid/Solvent free systems cured by peroxide or driers
- Solvent free UV-curable systems

For use in water-based systems like Alkyd Emulsions, ADDAPT VeoPox™ emulsions are available.

It is also possible, for those skilled in the art, to incorporate ADDAPT VeoPox™ in Acrylic, Styrene/Acrylic and VeoVa™ polymer dispersions via mini emulsion/mass transfer techniques creating even more interesting chemical hybrid systems for water-based DTM applications.

## VeoPox™ 2

ADDAPT VEOPOX™ 2 is a reactive precursor for hybrid coating and adhesive resin systems with excellent adhesive and anti-corrosion properties on metal surfaces.

It is a Fatty Acid/Phosphate/Methacrylate modified **Bisphenol A based** Epoxy system with VeoVa 10 as a reactive diluent.

Bisphenol A based epoxies are the workhorse for the majority of epoxy coatings for steel. It is used extensively because of its excellent adhesion, toughness, wear resistance and chemicals resistance. The Phosphate moiety gives even additional improvement of adhesion to metal and corrosion resistant properties whereas the Fatty Acid improves toughness and the (Meth)acrylate groups further improve the crosslink density which determines the chemical resistance.

The VeoVa 10 reactive diluent imparts low surface tension, pigment affinity, hydrophobicity and UV-resistance.

ADDAPT VEOPOX™ 2 WB is a reactive precursor for hybrid DTM coating and adhesive resins. It is a water based emulsion with excellent adhesive and anti-corrosion properties on metal surfaces.

## VeoPox™ 3

ADDAPT VEOPOX™ 3 is a reactive precursor for hybrid DTM coating and adhesive resin systems with excellent adhesive and anti-corrosion properties on metal surfaces.

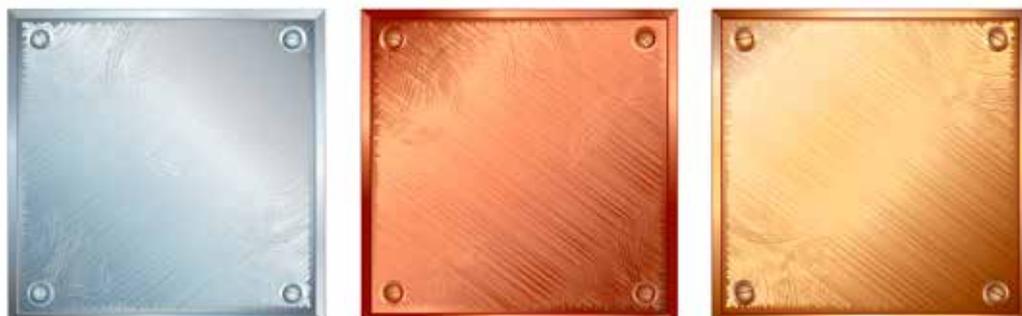
Like VEOPOX™ 2, it is a Fatty Acid/Phosphate/Methacrylate but modified with a **Bisphenol F based** Epoxy system with VeoVa 10 as a reactive diluent.

**Bisphenol F** resins are gaining steadily ground in civil engineering applications due to their improved chemical resistance properties, **impact toughness and impact strength**. Relatively to Bisphenol A resins, Bisphenol F types show lower viscosity.

ADDAPT VEOPOX™ 3 WB is a reactive precursor for hybrid coating and adhesive resins. It is a 50% active water-based emulsion with excellent adhesive and anti-corrosion properties on metal surfaces.

### Application areas:

- Structural steel
- Industrial steel
- Power plants
- Off-shore industry
- Maritime - Container coating



## CONTACT INFORMATION

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