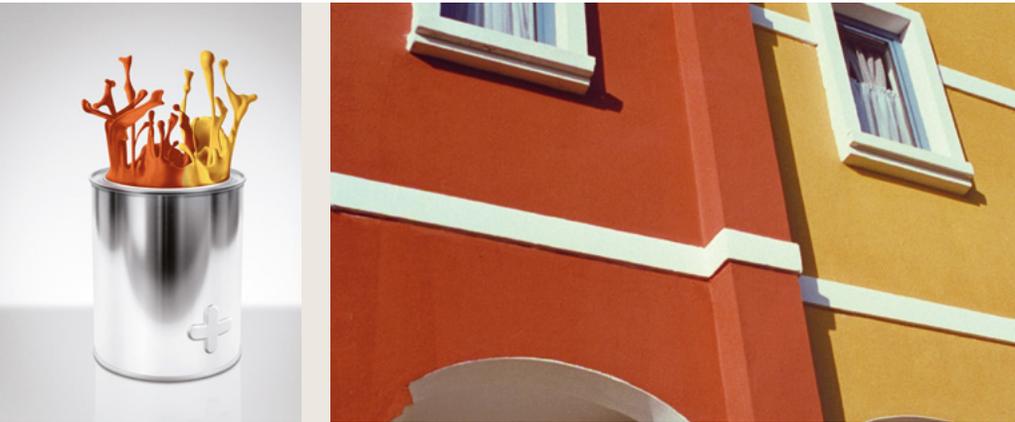


# TEGOtalk

Technews

Issue 02 | 16



## Iron oxide based architectural paints Utilize less colorant and achieve better hide

The manufacture of high-intensity red and yellow oxide colorants for architectural applications is challenging. Polyacrylate salts are commonly used as dispersing additives when stabilizing iron oxides in pigment concentrates. One of the weaknesses of these polyacrylate salts typically revolves around poor pigment concentrate stability and marginal color strength and hide. Therefore, a next-generation wetting and dispersing additive is needed in order to fill this void in the market.

The newly developed TEGO® Dispers 747 W allows long-term pigment stabilization as well as high color intensity, even after storage. TEGO® Dispers 747 W combines the advantages of electrostatic stabilization and steric stabilization, which gives the pigment concentrate stability while maintaining a low viscosity. By increasing the pigment loading, less concentrate is required to achieve the same hiding power when incorporated into the white or clear base. Nearly all inorganic pigments need more than one dispersing additive to grind and successfully stabilize the concentrate. TEGO® Dispers 747 W reduces complexity and leads to more efficient dispersing with only one additive.

TEGO® Dispers 747 W was developed specifically for water-based iron oxide concentrates for use in architectural coatings. This wetting and dispersing additive is also suitable for direct grind of inorganic pigments and fillers.

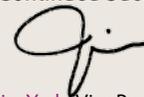
**tego** 

## Editorial

In the past few months, two significant pieces of legislation were passed that will have a major impact on our industry. The TSCA Reform Act and the Food Safety Modernization Act will increase transparency, streamline registration processes, and hopefully improve public perception and trust of the chemical industry. I personally applaud their passage and look forward to their implementation. Having spent my entire career in the chemical industry, I often lament to anyone who will listen about how the public perception is far different from the reality we know to be true. When was the last time the media reported on a non-hazardous chemical spill or talked about the statistically outstanding safety record that chemical manufacturing owns despite the inherent hazards associated with our processes. Here in Virginia, Evonik Corporation just surpassed 11 years without a time lost accident. This is an achievement we are proud of and, frankly speaking, view as a good start. Advocacy, awareness, and cooperation, along with solid product development, will help us all achieve our overall goals for the future.

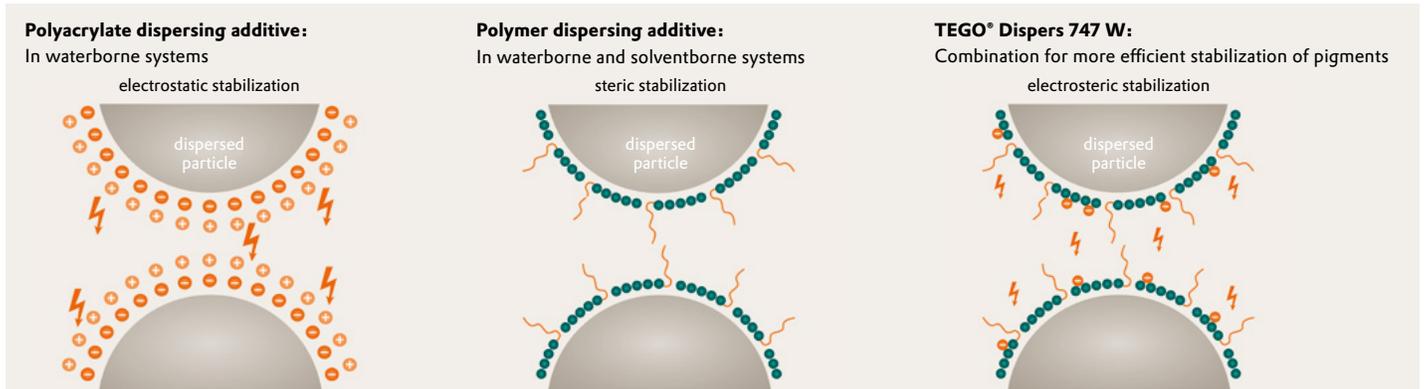
This newsletter focuses on our most recent dispersant for iron oxide pigments, TEGO® Dispers 747 W. It was developed with the same goal that many of our other recent offerings have in mind: Higher efficiencies, lower viscosities, and improved stability – all leading to more efficient utilization of valuable resources. We hope you find the discussion informative.

Continued Success,



Jim Yosh, Vice President Americas

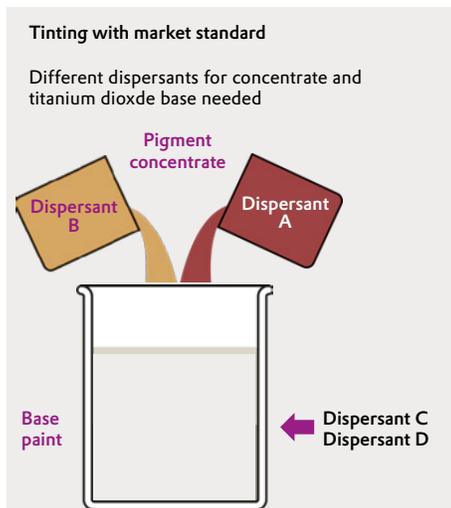
The best possible pigment stabilization



To achieve good pigment stabilization, the wetting and dispersing additive must successfully adsorb onto the surface of the pigment. Therefore, the additive requires anchor groups with high affinity for the pigment surface. In the case of iron oxide pigments, the additive should have pigment-affinic groups that are able to interact with the surface of the pigment via hydrogen bonding or dipole-dipole forces.

For stabilizing different iron oxide grades, the combination of electrostatic AND steric stabilization displays the best results.

Want to significantly reduce your raw material complexity?



Test results direct grind



Guiding formulations

Advantages:

- Outstanding pigment stabilization
- Efficient dispersing with excellent viscosity reduction
- Minimal effect on coating properties
- An electrosteric dispersing additive for diverse applications (eliminates the need for various dispersing additives)

Formulation advice

- In the case of foam formation, addition of TEGO® Foamex 8050 has proven useful.
- For inorganic pigment concentrates, the addition of rheological additives (e.g. pyrogenic silica) is useful.
- Starting formulations for the manufacture of pigment concentrates are available upon request.

TEGO® Dispers 747 W

pigment-wetting and dispersing additive

Effects

	0	1	2	3	4	5
Viscosity reduction with organic pigments/carbon blacks		█				
Color intensity/gloss with organic pigments/carbon blacks		█				
Viscosity reduction with inorganic pigments/fillers		██████████				
Color intensity/gloss with inorganic pigments/fillers		██████████				

0 = unsuitable...5 = highly suitable

General information & Product samples

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Right of refusal: You may request to discontinue the mailing of information and advertising at any time.

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More information at [www.tego.us](http://www.tego.us)