

Boosting Opacity

Have you transformed your formulation yet?



enhanced
by Omya



Omyacarb® Extra - GU

Excellent Optics and Dispersibility
with ChameleoBoost™ Technology



THINKING OF TOMORROW

Omyacarb® Extra - GU

Ultrafine Ground Calcium Carbonate in matt Decorative Paints with high Pigment Volume Concentration (PVC)

The use of Omyacarb® Extra - GU allows an optimization of titanium dioxide content based on the opacifying effect provided by its ultrafine particles. In formulations above the critical pigment volume concentration the titanium dioxide can be significantly reduced without compromising the dry opacity. Despite the pigment reduction the brightness and yellowness can be slightly improved.

Omyacarb® Extra - GU enables formulators also to reduce binder content by having a better filler packing in the system leading to additional cost savings without suffering in mechanical properties such as wet scrub resistance.

Economic interior emulsion paint with PVC 81%

	Control	Omyacarb® Extra - GU
Water, Binder & Additives	37.0	37.0
TiO ₂	10.0	7.6
Omyacarb® 2	26.5	15
Omyacarb® 5	26.5	26
Omyacarb® Extra - GU	0.0	14.4
Total	100.0	100.0

Results of optical properties

	Control	Omyacarb® Extra - GU
Brightness Ry	91.2%	91.4%
Yellowness index	4.0%	3.5%
Opacity (Gap height 150 µm)	95.1%	95.2%
Gloss 85°	4	5

Benefits

- High opacity and brightness
- Easy dispersible
- Saving pigment and costs
- Enhancing carbon footprint
- Substitution of titanium dioxide by dry hiding effect



Ultrafine Ground Calcium Carbonate in high gloss Coatings at low PVC

Omycarb® Extra - GU is designed to enhance the performance of pigments such as TiO₂ in a wide range of gloss levels. The extraordinary dispersibility in both water and solvent based systems characterize its properties. The performance of Omycarb® Extra - GU is assessed in a high gloss solvent-based alkyd coating. In the described example the titanium dioxide content is reduced by 10% from 25 weight parts to 22.5 weight parts replaced by Omycarb® Extra - GU at slightly higher dosage.

The examination of gloss and contrast ratio was done after the coatings were dried at ambient temperature. The optical properties were measured at a dry film thickness of 60 µm.

The data in results table shows that Omycarb® Extra - GU can be used without visual impact on gloss. Thus Omycarb® Extra - GU offers potential pigment and cost savings, e.g. of titanium dioxide, in the described solvent-based alkyd coating. In addition, the pigment savings lead to significantly lower carbon footprint of the coating formulation and helps to protect our environment.

High-gloss solvent based alkyd coating with PVC < 15%

	Control	Omycarb® Extra - GU
Alkyd binder, 70% in solvent	50.0	50.0
Co-binder, 50% in solvent	5.0	5.0
TiO ₂	25.0	22.5
Omycarb® Extra	-	4.0
Solvents & Additives	20.0	18.5
Total	100.0	100.0

Results of optical properties

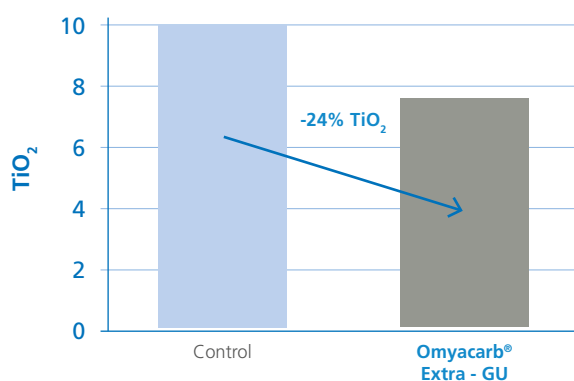
	Control	Omycarb® Extra - GU
Brightness Ry	87.2%	87.1%
Yellowness index	3.8%	3.9%
Opacity (Gap height 150 µm)	96.8%	96.7%
Gloss 20° / 60°	82.9/91.9	81.9/91.8

Benefits

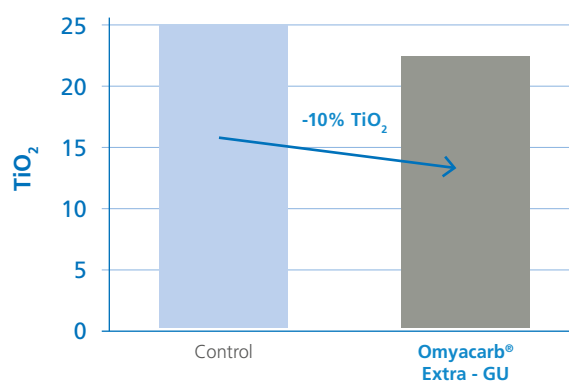
- High gloss
- Similar opacity
- Easy dispersible
- Saving pigment and costs
- Enhancing carbon footprint
- Substitution of TiO₂ by spacing effect



Economic interior emulsion paint
with PVC 81% at similar opacity



High-gloss solvent based alkyd coating
with PVC < 15% at similar opacity and
gloss level



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OMYA PIGMENTS**

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