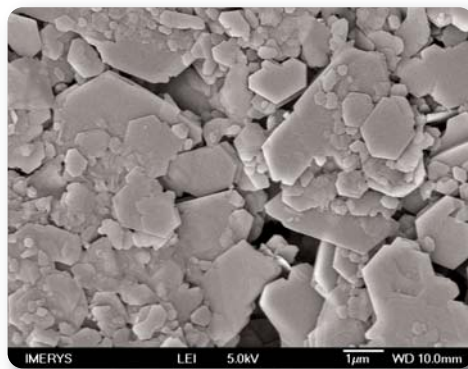


## Capim™ RG

Capim™ RG is a coarse, platy, high-bright clay which is ideally suited for rotogravure applications where talc usage is low and the clay has to impart coverage and printability. It has much higher brightness than other rotogravure clays on the market which are typically 81-83 ISO. Capim™ RG is also used in precoat and matt woodfree applications.

Pigment	Capim™ RG
ISO Brightness	88
wt% <2µm	53
wt% <0.25µm	6
D <sub>50</sub> µm	2.0
Shape Factor	40
Viscosity Concentration wt%	68
Applications	Precoat/Matt/Roto



## Capim™ RG in Rotogravure

In European rotogravure, recipes tend to contain significant amounts of talc and often a coarse, platy, low brightness partner clay. In this case, the principal role of the kaolin is to help give coverage, smoothness and generate low missing dots. However, increasing market pressures for paper brightness cannot be ignored. Capim™ RG combines excellent covering power with the high brightness needed in today's rotogravure. It is well suited for use in combinations with a medium fine Brazilian clay such as Capim™ NP.

European Rotogravure: 6 gsm coatings 56% Solids

	Gloss	PPS 10	UV Brightness	Opacity	% Missing Dots
Euro Roto Clay 65 < 2µm	51	0.75	72.3	87.0	0.8
Capim™ RG	51	0.72	73.5	86.7	0.4
Capim™ NP + 30% Capim™ RG	59	0.69	74.1	87.0	0.5

⊕ PCC

⊕ GCC

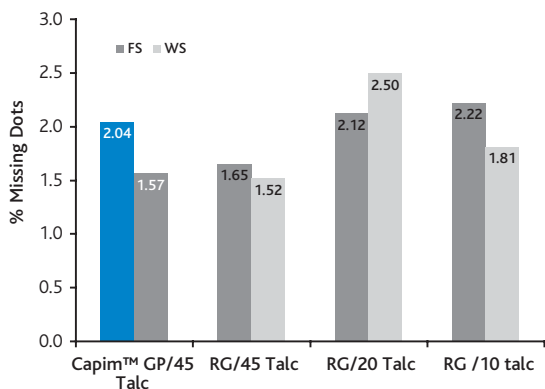
⊕ KAOLIN

## Capim™ RG for Talc Replacement in Rotogravure

Talc is used in rotogravure for its low abrasion, friction control and good printability. **Capim™ RG** is also good for printability and has low abrasion, so can be used to partially replace talc affording cost savings to the papermaker.

This example is taken from a pilot coating study in a neutral Northern European style recipe.

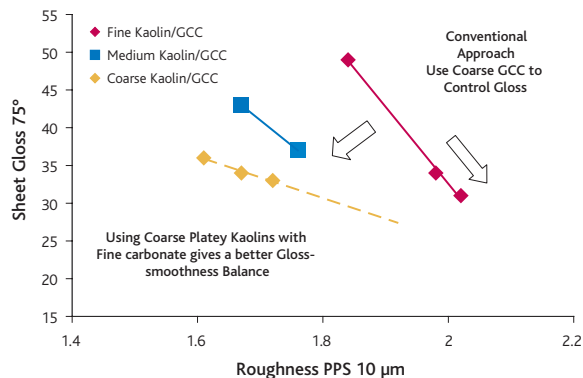
Trial	Ref	1	2	3
Talc	45	45	20	10
Capim™ GP	35	-	30	30
C90	20	20	20	20
Capim™ RG	-	35	30	40
Gloss	60	-4	0	-2
Brightness -UV	77.5	-0.1	0.4	0.4
Opacity	91.1	-0.3	-0.1	-0.3
Smoothness PPS10	0.81	0.05	0.06	0.03



Although **Capim™ RG** may be too coarse a pigment to deliver sufficient gloss if replacing medium shape, fine Brazilian kaolin this is not the case if talc is replaced. The optimum ratio of high shape factor **Capim™ RG** and medium shape, fine Brazilian clay can deliver similar gloss and smoothness and similar or improved optical performance, while maintaining good printability. We would, however, recommend retaining low levels of talc for friction control.

## Capim™ RG for Matt Applications

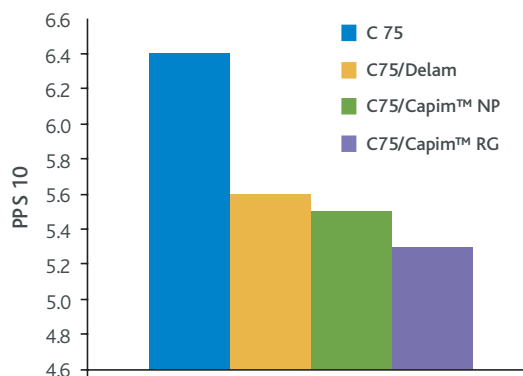
In matt and silk applications gloss is often controlled through the combination of reduced calendering and coarse GCC addition. However, reduced calendering with fine pigments can lead to gloss marking, while addition of coarse GCC is often bad for smoothness, print abrasion and print gloss.



In contrast, using a coarse high bright kaolin such as **Capim™ RG** together with fine GCC, controls gloss potential without the negative impact on roughness and print abrasion seen with coarse GCC.

## Capim™ RG for Precoat

**Capim™ RG** can give excellent coverage in precoating when used together with GCC. In general, coverage can be better than with finer clays such as NP, but light scatter and opacity are not as good. RG is particularly well suited to rough woodfree basesheets.



### Summary - Capim™ RG

Target Segment/ Application	Key Attributes
Roto	Missing dots performance and potential for Talc replacement, rheology vs conventional roto clays
Precoat	Coverage, minimal impact on brightness vs 100% GCC. Ability to use at low levels in recipe
Matt CWF	Gloss/PPS balance with high brightness