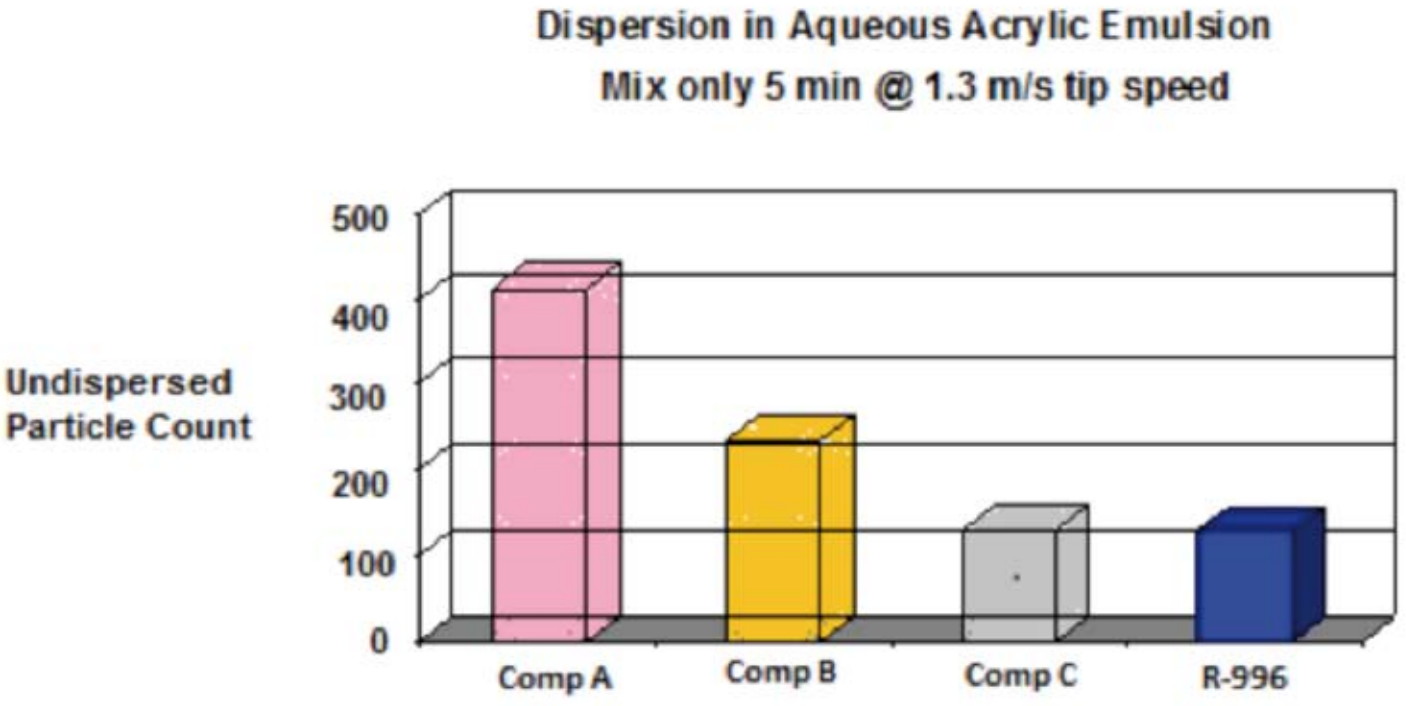
Ram Charan
PRODUCT DEVELOPMENT INFORMATION
VOLUME 1
ISSUE 9
FEBRUARY 2012

Lomon TiO2 Dispersion Performance in Waterborne Coatings

Lomon's multi-purpose titanium dioxide grade that provides superior overall value to the coatings industry, **Lomon R996**

The new Lomon TiO2 product that dispersed easily in a variety of coatings systems. The easier the TiO2 is to disperse, the less time and energy is required to incorporate the TiO2 into the coating thereby improving paint plant productivity. Easy dispersion of TiO2 also ensures that it is completely dispersed in each and every coating batch yielding more consistent coating quality and providing optimum TiO2 efficiency.

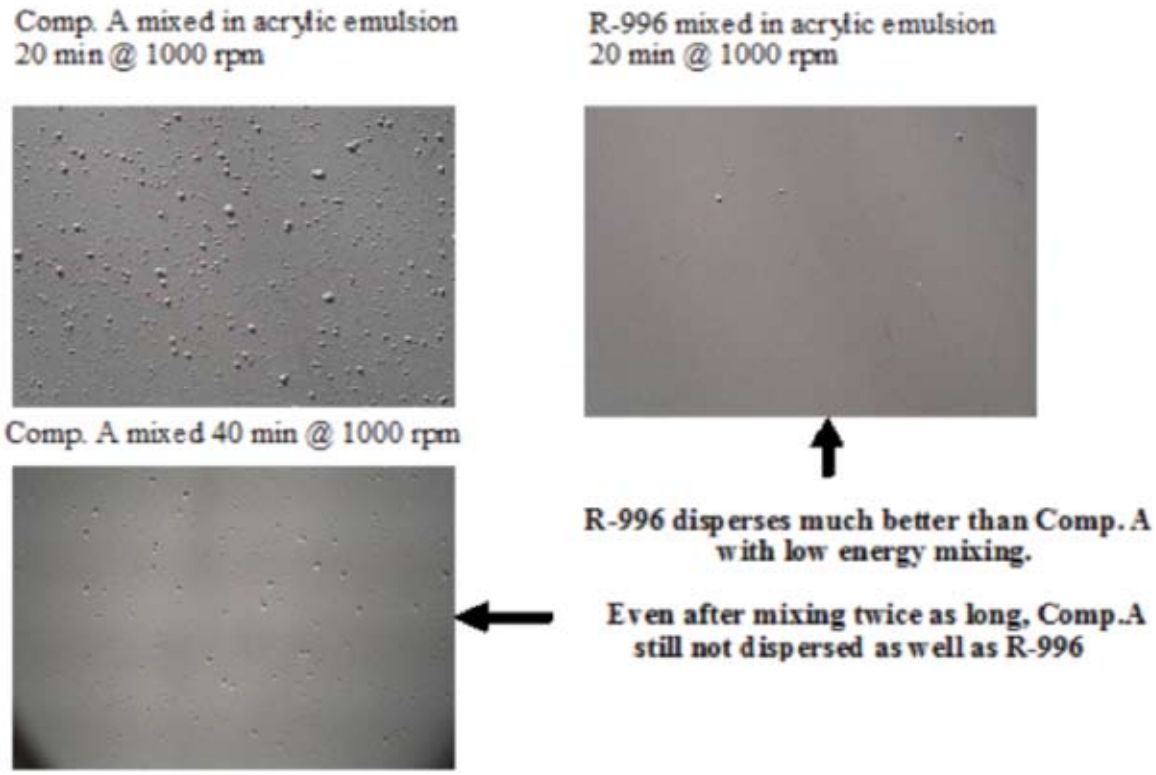
The graph below shows the advantage that **R-996** has in waterborne coating ease of dispersion relative to competitive pigments. Each pigment was mixed into an acrylic emulsion master batch for only 5 minutes at 500 rpm speed. The resulting paint was then drawn down to provide a 4 ml (100 micron) thick film. An optical microscope image of the drawdown was taken and the number of undispersed particles was manually counted. Clearly, of the grades compared, R-996 is among the easiest pigments to disperse in this waterborne emulsion.



Below are digital microscope images at about 10X magnification of the actual drawdowns made with dispersions of R-996 and a competitive grade in an acrylic emulsion. In the top images, each pigment was mixed for 20 minutes at 1000 rpm.

Under these low energy mixing conditions, **R-996** disperses much better than the competitive grade yielding a paint with just a few undispersed particles. Even after the competitive grade is mixed twice as long, it is still not as well dispersed as R-996. High quality emulsion paints can be made with less energy and in less time with R-996.

The easy dispersing characteristics of **R-996** in waterborne coatings have also been demonstrated by coating producers.



This coating producer has extensive capability to evaluate new raw materials at a research center focused on the development of new technology and R&D for coatings. Their testing showed that R-996 decreased dispersion time in waterborne coatings by 50% compared to their standard TiO2 grade, while still maintaining the same paint performance properties (tinting, hiding, color, etc). As a result of these very favorable results, this customer converted to R-996.

So this completes of objects that describe the development and commercial realization of a new multi-purpose titanium dioxide grade for the coatings industry, Lomon R996 From concept to commercial realization, the goal of Lomon R-996 has been to deliver superior overall value to the coatings industry.

TiO2 RUTILE TECHNICAL DATA SHEET

TYPE	R-996
Crystal Form	Rutile
Classification ISO591, DIN55912	R2
ASTM D476	II
CAS No.	13463-67-7
TiO2 Content(%) min	93
pH Value	6.5~8.5
Density (g/cm3)	4
Oil Absorption (g/100g) max	22
Specific Resistance (Ωm) min	150
Average Particle Size (µm)	0.23
Surface Treatment	Zirconia & Alumina, Organic

Ram Charan Company | "Century Towers", 46, Barnaby Road, Kilpauk, Chennai - 600 010
Tel : +44 - 4353 9040 / 41 / 42 Fax : +44 - 4330 7050 Email : all@ramcharan.org

Mumbai | 09821216311 mumbai@ramcharan.org
Kolkatta | 09433346713 calcutta@ramcharan.org
Hyderabad | 09848208821 hyd@ramcharan.org
Chennai | 044 43539040 chennai@ramcharan.org
Hosur | 09443272475 hosur@ramcharan.org
Madurai | 09843044928 madurai@ramcharan.org
Cochin | 09847030708 cochin@ramcharan.org
Bangalore | 09980777298 bangalore@ramcharan.org