



Ethox
CHEMICALS, LLC

INK JET DISPERSIONS USING ESPERSE 100 AND ESPERSE 600

Two examples of stable, waterbased ink jet dispersions:

ETH 21207-1

Regal 660 R	143.50
Esperse 100	25.00
Defoamer 31	5.50
Water	<u>150.00</u>
	324.00

28 g of water is contributed to the batch from the mill media, so actual batch size milled is 352 g. This combination is premixed for 10 minutes, then milled on an Eiger Mini 100 horizontal media mill for 35 minutes, using a 75% charge of 0.8 mm YTZ high density media. In the last two minutes of milling, 128 g of water is added to reduce the pigment loading to 30%.

The second formula is:

ETH 21207-2

Regal 660 R	100.00
Esperse 600	25.00
Defoamer 31	5.50
Water	<u>150.00</u>
	280.50

28 g of water is contributed to the batch from the mill media, so actual batch size milled is 308.5 g. This combination is premixed for 10 minutes, then milled on an Eiger Mini 100 horizontal media mill for 35 minutes, using a 75% charge of 0.8 mm YTZ high density media. In the last two minutes of milling, 26.83 g of water is added to reduce the pigment loading to 30%.

For Regal 660R, slightly more color was produced from the black using Esperse 600 vs. Esperse 100; however, Esperse 100 seems to allow higher pigment loading in the grind using this particular carbon black.

Products:

Regal 660R is available from Cabot Corporation

Esperse 100, Esperse 600, and Defoamer 31 are available from Ethox Chemicals, LLC. Defoamer 31 is a new, non-silicone product useful for preventing or mitigating air entrainment in dispersion and coating formulations.

Esperse 600 is a new dispersing additive from Ethox which can be used for resin-containing or resin-free grinding.