NOVOSYSTEMS®
LIQUIDCOLORS

1. Description of the Novotone system

With just 15 main colors, Novotone can replicate the whole Pantone color tone range. Each Panton color tone has its individual recipe where Novotone Main Colors are mixed to produce the desired color tone. What's more, Novotone can be used for both liquid colors as well as Novosystem's Novopearls microbatch.

Just choose the Pantone color you wish to replicate and accurately create this color tone by mixing the specified Novotone Main Colors. The classic Pantone fan forms the basis for color selection and control. If required, color measuring equipment can be deployed for corrections and defining recipes of further colors. With Novotone, a manufacturer of plastic products can be quickly created a very wide range of colors, quickly and cost-effectively, from just a small number of main colors. The Pantone color fans currently cover some 2,100 color tones.

2. Mircobatch Pantone color spectrum for liquid colors and Novopearls mircobatch

Novosystems has developed Novotone for use with liquid colors as well as Novopearls, a wax-based micro-granulate. Novopearls is a solid with many of the characteristics of liquid colors yet makes even higher charge ratios possible. At the same time, it offers cost savings compared to conventional color batch material. Depending on application, colors based on the Pantone fan can be created in numerous materials. These include bulk plastic materials such as polyolefins or PP, technical plastics like ABS, PVC or PS, as well as PUR. Liquid colors and Novopearls can deployed with processing temperatures up to 350 °C.

In addition to colors themselves, the Pantone fans include additional color information such as the mixing ratio of the main colors (color recipe). The Pantone Matching System offers uniform, exactly defined, reproducible color recipes.

3. Process diagram for the example of violet Pantone 2583:

First, select your color then the recipe is formulated followed by dosing of either liquid color or micropearls to produce the product in the desired color tone.

NOVOTONE MAINCOLORS

MIXING

FORMULAR

DOSING

COLOR SELECTION

the BA

VIOLETT PANTONE 2583

4. Selection of colorant

15 main colors are required to replicate to whole range of Pantone colors:

WHITE	Orange 021	RHODAMINE RED	Reflex Blue
BLACK	Warm Red	PURPLE	PROCESS BLUE
Yellow	RED 032	VIOLET	Green
Yellow 012	RUBINE RED	BLUE 072	

Please note that depending on type of plastic, the specific pigments and the price can vary. For example, a selection of main colors which can be limited to use with polypropylene is significantly cheaper.

The exact costs for your coloration requirements can only be accurately calculated if your color range with the quantitative distribution and the various products together with their requirements have been defined.

A rough idea of the expected costs is shown in the following tables:

The calculation examples above are based on the assumption of an even distribution of amounts for the complete Pantone color tone range. Here we have taken into consideration that in this case, not every Novotone Main Color is required in the same amount.
Thus the 50 % color batch to basic plastic material requirement for white is relatively high, while Red 032 has requirements of only 1 % color batch.

If your production requires a color range consisting mainly of brown, gray and white tones, this would result in a significantly lower price per kilo. In contrast, if a color range of mostly bright red, orange and yellow tones were to be covered, this would lead to a higher price per kilo affecting the whole range of main colors.