

# Technical Data Sheet

## PHANTOM INVISIBLE PIGMENTS

### General Description

The DINV Phantom Invisible Pigments are organic, UV reactive pigments. They are virtually invisible in most applications until excited by UV light (long wave 365nm or short wave 254nm). They have strong, bright emissions.

They are best for indoor applications due to limited lightfastness. These pigments have no afterglow.

Available Colors	
Product Code	Color
DINV-13	Red
DINV-17	Yellow
DINV-18	Green

### Applications

DINV Phantom Invisible Pigments are designed for use where they are not intended to be apparent, such as tracers and security applications. They can also be used for a variety of novelty effects where its invisible nature can be exploited. Because each application can require different levels of UV response, recommended use levels vary. Use 0.5% as a starting point and adjusted as needed. Prolonged outdoor exposure is not recommended due to the limited lightfastness properties of this product.

### Notes on Use

DINV Phantom Invisible Pigments can be milled as necessary to reduce particle size. However, strong milling or grinding may result in a reduction of emission intensity.

The use of opaque fillers or extenders should be avoided as these may quench luminescent emissions. In addition, DINV Phantom Invisible Pigments should not be blended with conventional pigments. They can be mixed with other invisible pigments, as these colors work additively. The invisible color can be applied over another color in the form of a clear lacquer to achieve a different color under UV light.

### Health and Safety

DINV Phantom Invisible Pigments are generally considered to be of a low toxicity if used and stored as recommended. If stored in sealed containers in darkness, the shelf life should be indefinite. Please refer to the separate MSDS for specific information.

Disclaimer: Our technical advice, information, statements, whether given verbally, in writing, or in the form of test results, is offered for your guidance without warranty. No warranty for fitness for a particular purpose is made. This also applies where protective rights of third parties are involved. It does not release the user from obligation to test the suitability of the products and formulas for the intended process and applications. Our guarantee is limited to the consistent quality of our product.

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	<b>DINV-13</b>	<b>DINV-17</b>	<b>DINV-18</b>
Emission Color	Red	Yellow	Green
Peak Emission	614 nm	533 nm	507 nm
Appearance	Off white powder	Off white powder	Off white powder
Specific Gravity	1.4	1.4	1.02
Average Particle Size	5 $\mu$ m	5 $\mu$ m	5 $\mu$ m
Maximum Processing Temperature	50°C	100°C	250°C
Lightfastness Blue Wool Scale	1-2	1-2	1-2
Oil Absorption per 100 g of pigment	41 g	49 g	42 g
Bulk Density (g/ml)	0.210	0.155	0.183
Bulk Density (lbs/gal)	1.75	1.29	1.53
Chemical Composition	Organic europium complex	Organic non-ionogenic oxazine derivative	Quinazolinone

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