

# **Bright Neon Pigments for Resin TDS**

## **Pigments distributed by Bastion Paint**

### **1. Basic Overview**

This pigment range is the only range of Bright Neon Pigments we have found that can be easily mixed (by simple stirring) into epoxy resins and polyester resins.

These pigments are also suitable for use in plastics and can also be mixed into many water-based mediums (see more information on applications in point 2).

Daylight and ultra-violet responsive fluorescent colourants - free of formaldehyde. A dyed/pigmented thermoplastic polyamide-ester copolymer.

In daylight the bright neon colour effect is often referred to as a day-glow.

In relatively dark environments with ultraviolet light the pigments glow vividly.

As with all Neon Fluorescent pigments/colourants these pigments are not lightfast and as such end applications should be limited to interior applications.

### **2. Applications**

Day-glow and UV-active (fluorescent) effects.

Applications include the generation of bright neon colours in manufactured items (for safety and aesthetic purposes) as well for achieving vivid UV glow effects with ultraviolet lights.

These pigments are not certified for cosmetic applications.

#### **2.1 Epoxy and Polyester Resins**

The Pigment Powder is added directly into epoxy and polyester resins and stirred in by simple hand stirring. These are the only neon pigments we have found that do not clump and are chemically stable in a wide range of room temperature cured resins. In these applications the powder remains as distinct pigment particles and is not melted. As all resin brands differ somewhat in their chemistry, we cannot guarantee excellent results with all resin types and hence users should perform tests with their resins on a small scale first. We know they work very well in all the resins that we sell.

There is a low settling tendency of the powder in resins as the density of the resin system and the pigment powders is quite similar (resin SG is usually about 1.1g/ml while the pigment powder SG is 1.2g/ml). As soon as the resin system increases in viscosity (which happens during curing) then settling becomes impossible.

These pigments are stable up to 240°C and thus easily handle the curing temperature of normal resins.

## 2.2 Water Based Mediums

The chemistry of these pigments allows for dispersion into water-based mediums.

We have obviously not tested dispersion into all water-based mediums hence users should perform tests with their systems on a small scale first.

The pigments are stable against quite high shear forces and good mechanical mixing, with medium to high shear, is required to avoid clumping and to get the best dispersion which also gives the best colour development.

When added to water-based mediums such as paints, it may be required to add dispersing chemicals. The best dispersant chemistry for the user's system needs to be determined by the user although we can assist customers who have purchased these pigments from us in large quantities.

Customers need to test these pigments in their specific applications and to check for long term stability in wet mediums, such as paints, that are to be stored before use.

## 2.3 Plastics

High strength, fast dispersing colours for plastics.

Compatible with most plastic polymers in general use.

Process between 175 and 240°C. Full melting should be achieved.

It is best to hold at the minimum temperature that allows full melting.

## 2.4 Other applications

We have supplied these pigments for applications such as dust leak identification, insect tracking and fruit spray applications.

For use in fruit spray applications the user must be aware that the pigments have not been tested or certified for food contact. Being formaldehyde free they are fine when applied on the outside of fruit with a relatively thick skin that will be removed prior to eating. Under no circumstances can we recommend these pigments for application onto fruit where the pigment may be ingested. Be aware that fruit inspection with UV light will probably cause the colour pigment to show up which may be a problem with fruit destined to be exported.

We do have a totally different product that is more suited to and easier to use in fruit spray applications. Please contact us should you require information on this.

## **3. Chemical Classification**

A dyed/pigmented thermoplastic polyamide-ester copolymer.

These pigments fit into the Harmonised Tariff Code Category of both 3206.42.00.

Formaldehyde free specifically for use in plastics.

#### **4. Properties**

Excellent brightness and colour strength.

Very bright neon colours often referred to as day-glow effect.

Fluorescent (UV reactive). Glow vividly when exposed to UV light in relatively dark environments.

Particle size: 8-16um (less than 20um)

SG: 1.2g/ml

Bulking Value: 0.3-0.4g/ml

Softening point 120-160°C

Melting point in plastic applications: 175-240°C

The pigments will decompose at high temperatures so do not expose them to temperatures above 240°C.

As with all coloured fluorescent pigments, the colour is not lightfast and will demonstrate colour fading in direct sunlight or upon exposure to other sources of UV light. Attempts to reduce this fading tendency by overcoating with topcoats that are UV absorbing and/or UV blocking will result in diminished colour brilliance. As such these pigments are only recommended for interior applications.

We keep stock of 6 colours but there are other colours available and the purchaser should contact us if they require other colours.

While the day colour of the following pigments differs, they all generate a very similar vivid orange glow in the dark when exposed to UV light.

- HP Fluorescent Red
- HP Fluorescent Orange
- HP Fluorescent Pink

It thus follows that if the user's only application of these pigments is to glow under UV light then they need only purchase one of the above products and the glow colour will be orange.

HP Fluorescent Yellow, HP Fluorescent Green and HP Fluorescent Blue glow the expected colour under UV light.

#### **Complied by and Revision Date**

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**Revision Date:** 30 December 2021

**Signature:** \_\_\_\_\_