

November, 2019

Issue 4

Inorganic Pigment Blue27

— Coloring for Pesticide Applications

Pigment blue 27 (PB27) is a deep blue inorganic pigment made of iron salt and ferrocyanide. Its color is also known as Iron blue, Chinese blue, Prussian blue, Milori blue and so on. The pigment's chemical formula is $\text{Fe}[\text{Fe}(\text{CN})_6]\text{NH}_4$. PB27 is mainly used in inks and coating applications but is also suitable for the coloring of pesticides.

TCB02705N is a specific grade of pigment blue 27 without surface treatment that is intended for pesticide colorants. It has a clear blue tint, a fine particle size and offers good fastness properties with the exception of alkali resistance.

The product has been REACH registered and conforms to the relevant requirements of EU REACH legislation.

Physical & Properties:

Appearance	Blue Powder
Moisture (105°C)%	2~6
Oil absorption (g/100g)	≤50
Soluble matter in water (%)	≤1.0
pH value (10% slurry)	3~6
Residue on sieve (500mesh) (%)	≤2.0
Particle size distribution D50 (μm)	≤1.0
Specific surface (BET) m ² /g	50~80

Fastness Data (1~5 Scale)

Heat Stability °C	160
*Light Fastness	5
Water Resistance	5
Oil Resistance	5
Acid Resistance	4
Alkali Resistance	1
Alcohol Resistance	5

*Light Fastness is 1~8 Scale

The Use of Alternative Organic Pigments to Replace Inorganic Lead Chromium Pigments

Lead chromium pigments generally refer to pigments containing lead and hexavalent chromium. They can be divided into orange chrome yellow, deep chrome yellow, middle chrome yellow, light chrome yellow and lemon chrome yellow depending on the raw material proportions and preparation conditions. The production process is simple, and the pigment offers excellent stability and weather resistance. It is suitable for use in building paint, ceramics, enamel, rubber, plastic parts, road markings and more. Because of its lead and hexavalent chromium content, it however has a certain toxicity. So, although it has good covering, weather resistance, light resistance and other advantages, its use is increasingly restricted by an ever growing number of regulations and guidelines.

Organic pigments have a higher color intensity, are brighter in tone, and offer the complete color spectrum. They also boast features such as good weather fastness, heat resistance, anti-crystallization and anti-flocculation properties, as well as resistance to migration, etc. This enables them completely to replace toxic, heavy metal, inorganic pigments such as chrome yellow, molybdenum red and cadmium red.

Trust Chem has launched organic pigment alternatives that offer our customers different choices of solutions (divided into low cost and high performance solutions):

Yellowish --- Hue --- Reddish
PY34 PR104

Application | Low cost alternative solution

Coating | TCY074020 / TCY01302 / TCY06503 / TCY08305P / TCO03401 / TCR11205 / TCR48401

Plastic | TCY16802 / TCY01302 / TCY06201 / TCY08301P / TCY19101 / TCO01301 / TCO03401 / TCR53101

Yellowish --- Hue --- Reddish
PY34 PR104

Application | High performance alternative solution

Coating | TCY15101 / TCY15402 / TCY13902 / TCY11002 / TCO06401 / TCO03602 / TCR25402

Plastic | TCY12801 / TCY15101 / TCY18001E / TCY13904 / TCY11002 / TCY18101 / TCO06401 / TCO03602 / TCR25402



INTRODUCTION-EN71

The EN 71 series standards produced by the European Committee for Standardization (Comité Européen de Normalisation, CEN) are the European harmonized toy safety testing standards and specify the safety requirements for toys. Compliance with the standards is legally required for all toys sold in the European Union.

The EN 71 series was originally published in 13 parts which covered mechanical and physical properties, flammability, a specification for the migration of certain elements, requirements for organic chemical compounds, special requirements for specific toys, and graphical symbols for age warning labelling.

Newly introduced parts of EN 71 become the latest harmonized standards and support the chemical requirements of the newest amendments of the EU Toys Safety Directive (2009/48/EC). These new parts replace the old EN 71 parts which subsequently come to an end.



In April 2019, CEN published the 2019 version of EN 71-3 for the migration of certain elements in toys.

The new EN 71-3 standard specifies requirements and test methods for the migration of aluminum, antimony, arsenic, barium, boron, cadmium, chromium (III), chromium (VI), cobalt, copper, lead, manganese, mercury, nickel, selenium, strontium, tin, organic tin and zinc from toy materials and from parts of toys.

Organic pigments are widely used as colorants in toy materials and parts including in surface coatings (e.g., paints, inks, etc.), plastics, rubbers, textile materials, finger paints, paints, ink in pens, coloring pencil cores, chalk, crayons and other solid materials intended to leave a trace.

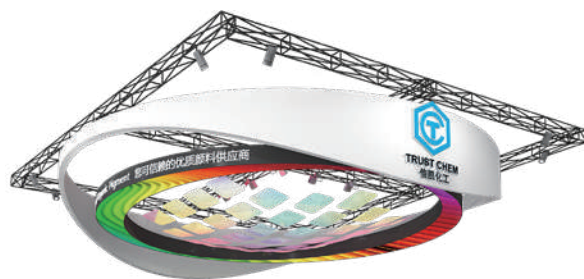
Trust Chem attaches great importance to compliance with this standard and submits samples for heavy metal testing every quarter. To date, we have received over 4,000 reports related to EN 71-3. We aim to provide the best service and requirements-compliant products.



CHINACOAT 2019

—Please visit us at W3.B21

Trust Chem will participate in the CHINACOAT 2019 to be held in Shanghai, China from November 18-20, 2019. CHINACOAT is a world-class coating exhibition. Every November or December, tens of thousands of professionals from all over the world come to China to attend the show. The 2019 edition of the China International Coatings show is imminent. We invite you to meet with us to exchange thoughts about the possibilities and to get inspired.



Newsflash

I . Establishment of Trust Chem Turkey

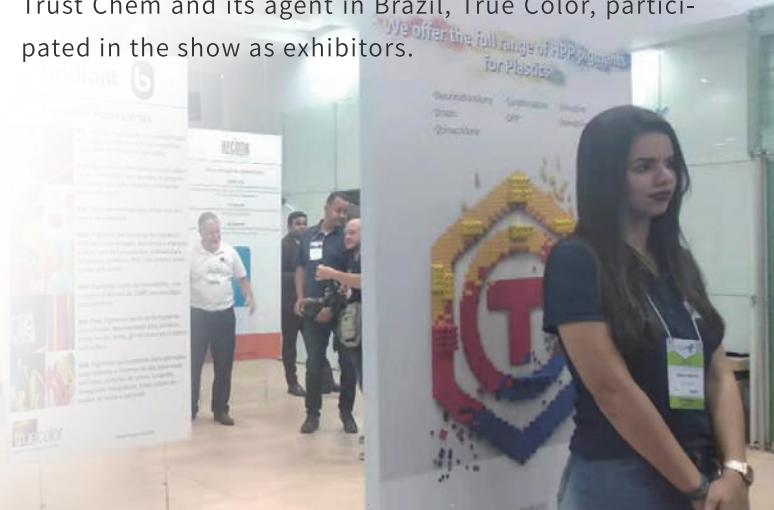
Trust Chem Turkey was established on May 24, 2019. By setting up an office and our warehouse in Turkey, we can serve the market quickly and efficiently and hence further expand the influence of Trust Chem in Turkey.

II . Trust Chem Attended CAD RETEC 2019

The 57th Annual Society of Plastic Engineers Color and Appearance Division RETEC® was held in Cleveland, Ohio, USA from September 23 – 25, 2019. CAD RETEC® is the longest running and largest technical conference in North America devoted to the coloring of plastics. Trust Chem took part in CAD RETEC® as gold sponsor.

III. Trust Chem Attended ABRAFATI 2019

ABRAFATI 2019 was held from October 1-3, 2019 in São Paulo, Brazil. This is the largest and most influential professional exhibition of coatings in South America. Trust Chem and its agent in Brazil, True Color, participated in the show as exhibitors.



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