



TIOXIDE® TR92

the bestseller

multi-purpose

excellent colour

high opacity

HUNTSMAN

Enriching lives through innovation

multi purpose
excellent colour
high opacity

TIOXIDE® TR92

TIOXIDE® TR92 pigment is a multipurpose grade of titanium dioxide which has been designed to give optimum properties over the widest possible range of applications in many industries, such as coatings, plastics, inks and paper. It wets and disperses readily in a very broad range of aqueous and solvent based coatings. The grade is known for its high opacity, excellent colour and multi-functionality.

TIOXIDE® TR92 pigment is a very well established grade, launched after many years of development and subjected to continuous incremental improvements to ensure it gives the highest levels of performance across a wide range of applications. The success of TIOXIDE® TR92 pigment is reflected in the broad usage that this grade has achieved, since it is now used in coatings, plastics and specialties applications (See Figure 1).

The flexibility of TIOXIDE® TR92 pigment is emphasised by the variety of coating applications in which it is incorporated. Industrial Specialist applications include vehicle refinishing, powder coating and coil coatings amongst others, while Industrial General Purpose covers a range of metal finishing applications for which TIOXIDE® TR92 pigment is highly suitable.

In Europe, TIOXIDE® TR92 pigment is the most widely used titanium dioxide pigment. In recent years, product development efforts have been used to improve the overall quality and performance of TIOXIDE® TR92 pigment, to ensure that it continues to be as competitive as ever, and that it retains its best selling status.

FIGURE 1

Uses of TIOXIDE® TR92 pigment by application

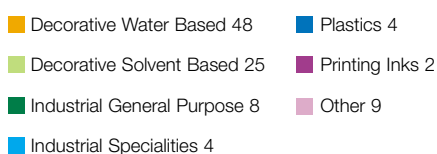
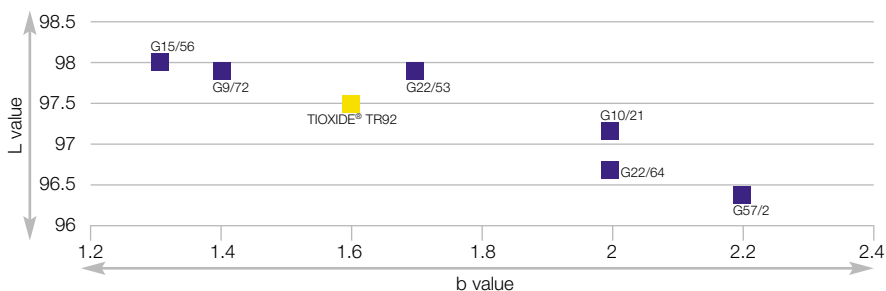


FIGURE 2

Colour results for an Alkyd/MF paint



PROPERTIES

This table includes the typical properties of this grade. It is not a specification, although specifications are available.

TiO ₂ Content	92.5% minimum
Inorganic coating	Alumina, Zirconia
Organic treatment	present
Crystal size	0.24µm
Specific gravity	4.1 g/cm ³
Loss at 105°C ^(a)	0.6%
Bulk density (tamped) ^(a)	1.2 g/cm ³
Oil absorption ^(a)	18 cm ³ /100g pigment
Water demand ^(a)	28 cm ³ /100g pigment
Durability	Highly durable
ISO 591-1:2000	R2
ASTM D476-00 (2005) designation	II,III,IV

^(a)Measured within 48 hours of production

^(b)Based on ISO 787/11: 1981

^(c)Palette knife method, ISO 787/5: 1980

^(d)In the presence of 0.4% sodium salt of complex polyphosphate calculated on the mass of pigment.



Following intensive work to continuously improve grade performance, TIOXIDE® TR92 pigment is now produced more consistently and with better optical performance than ever before. The grade already has an excellent track record for critical performance indicators such as colour, opacity and gloss.

The good colour performance of TIOXIDE® TR92 pigment can most easily be demonstrated in industrial applications, where resins tend to be colourless. In Figure 2 (left), colour results (L and b values) are shown for an alkyd/MF paint pigmented with TIOXIDE® TR92 pigment and other key competitive grades.

The opacity results (contrast ratio at 20m²/l spreading rate) are shown for an acrylic emulsion paint in Figure 3. Compared to a series of other well established competitive grades, the performance of TIOXIDE® TR92 pigment is generally amongst the best.

In Figure 4, results for a third critical performance indicator, gloss, are shown. As overbake gloss results tend to be more discriminating than normal bake results, overbake results for an alkyd/MF paint have been used to illustrate the good gloss performance of TIOXIDE® TR92 pigment.

As would be expected from a top performing grade, TIOXIDE® TR92 pigment offers excellent dispersion properties, not only in air-drying alkyd paints as shown in Figure 5, but also in a wide range of industrial applications and emulsion paints.

FIGURE 3

Opacity results for an acrylic emulsion paint

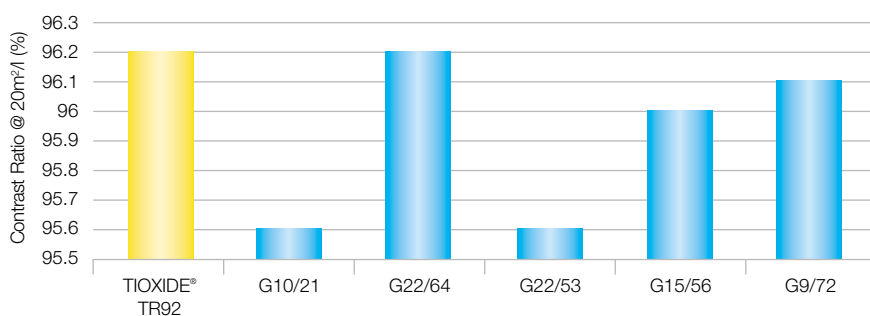


FIGURE 4

Overbake gloss results for an alkyd/MF paint

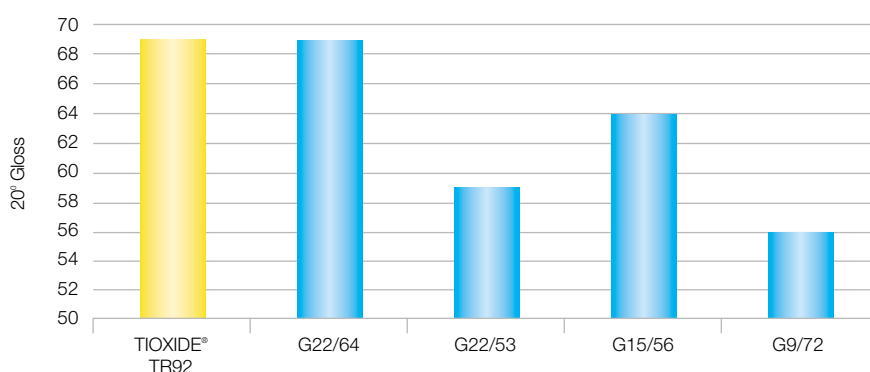
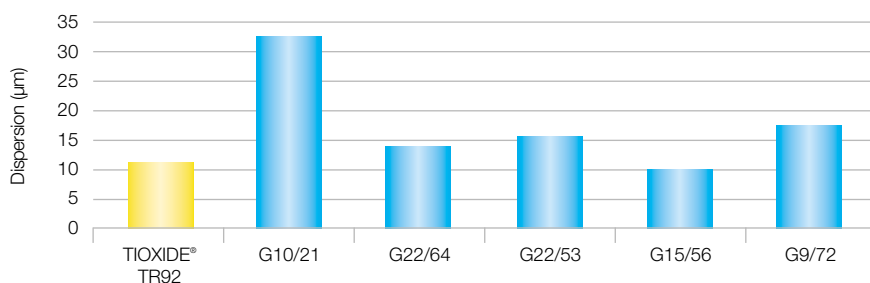


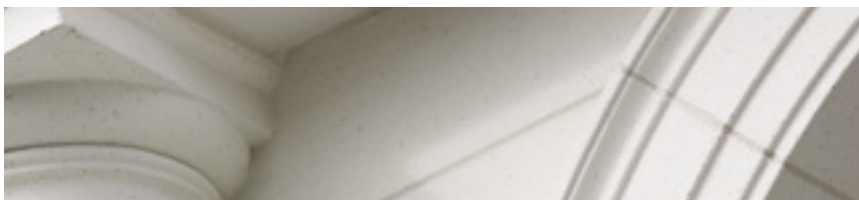
FIGURE 5

Grind guage dispersion results for an air-drying alkyd paint



Tioxide®

Titanium Dioxide Pigments



This leaflet is a general guide to the properties of TIOXIDE® TR92 pigment and its potential applications. More detailed information about TIOXIDE® TR92 pigment is available from Technical Service personnel at Huntsman Pigments.

Although all information is given in good faith, we do not guarantee the accuracy or completeness of information, or that TIOXIDE® TR92 pigment will be suitable for your particular purposes. Samples are available on request.

You should ensure that any process you use or product you make using Huntsman pigment does not infringe any patent.

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TIOXIDE® is a registered trade mark of Huntsman Corporation or an affiliate thereof in one or more, but not all, countries.

It is Huntsman Pigments' policy to update this information regularly. You are therefore advised to check that this leaflet is the most up-to-date version.

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TIOXIDE® TR92 pigment is used in a large number of applications, across a large part of the world. With sales in more than one hundred countries, TIOXIDE® TR92 pigment is a truly global grade.

PRINCIPAL APPLICATIONS	OUTSTANDING PROPERTIES
Emulsion paints (Matt, textured, full and semi-gloss).	Dispersibility, optimum gloss, opacity, whiteness
Solvent based gloss paints	Dispersion, opacity, whiteness, durability
Alkyd matt paints, primers and undercoats	Colour, opacity, dispersion
Automotive finishes and refinishes	Gloss, opacity, durability
Powder coatings	Colour, opacity, durability
Metal decorative and appliance enamels	Opacity, dispersion, whiteness
Coil coatings	Dispersion, gloss, durability

Huntsman does not recommend any of its titanium dioxide pigments for use in lead-stabilised, rigid PVC formulations.

SAFETY, HEALTH AND ENVIRONMENT

As for all fine powders, the handling of titanium dioxide pigments can give rise to airborne dust. Good industrial hygiene practice should be observed so as to avoid the generation and subsequent inhalation of dust. For more information refer to our material safety data sheet.

FOOD CONTACT

The subject is too wide to be adequately covered in a technical data sheet and customers should seek confirmation of compliance for each of the particular regulations they are interested in by contacting Huntsman Pigments Group Technical Service or the local sales forces.

STORAGE AND SHELF LIFE

The pigment should not be stored in outside areas exposed to the weather. All direct contact with moisture should be avoided. By storing the pigment correctly, its properties should not deteriorate with time. However to ensure optimum performance, it is recommended that the product is used on a first in, first out basis from receipt of shipment.

For further information, contact:

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