



TIOXIDE[®] R-FC5

the versatile grade for plastics

consistent
versatile
reliable

HUNTSMAN
Enriching lives through innovation

consistent
versatile
reliable



TIOXIDE® R-FC5

TIOXIDE® R-FC5 pigment is a fine crystal rutile pigment designed specifically for use in plastics applications where it imparts excellent brightness, a blue undertone and high opacity. Its siloxane treatment ensures both low moisture pickup and outstanding dispersion properties so that it can be incorporated in both liquid and melt systems with minimal effect on viscosity.

The industry standard

TIOXIDE® R-FC5 pigment is a versatile, rutile titanium dioxide pigment which has been designed to give an optimum balance of properties in a wide range of plastics applications. For over 30 years TIOXIDE® R-FC5 pigment has been appreciated for its excellent dispersibility, high tinting strength and blue undertone.

TIOXIDE® R-FC5 pigment has benefitted from continuous manufacturing improvements which have enhanced performance and ensured consistent optical properties. Versatility in application combined with consistency in performance are the attributes which explain why TIOXIDE® R-FC5 pigment has become a plastics industry standard.

The main plastics application areas for TIOXIDE® R-FC5 pigment are:

- Masterbatch for packaging products, including single and multi-layer films, injection moulded containers and blow mouldings
- ABS and polystyrene compounds
- Rigid and flexible PVC compounds for non-weatherable products
- Polypropylene compounds for non-weatherable applications

PROPERTIES

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

TiO ₂ Content	97.5%
Inorganic coating	Alumina
Organic treatment	present including Siloxane
Crystal size	0.19µm
Specific gravity	4.1 g/cm ³
Loss at 105°C ^{*)}	0.3%
Bulk density (tamped) ^{*)}	1.2 g/cm ³
Oil absorption ^{*)}	16 cm ³ /100g pigment
Surface area	7m ² /g
Durability	Moderately durable
ISO 591 classification	R2
ATSM D476 designation	II

^{*)}Measured within 48 hours of production

^{*)}Based on ISO 787/11

^{*)}Palette knife method, ISO 787/5





It is Huntsman Pigments philosophy to continuously strive to improve the properties of its titanium dioxide pigments which are important to the plastics industry.

The ease of dispersion of TIOXIDE® R-FC5 pigment, as shown in Figure 1, is an excellent example of the level of performance that can be achieved when this approach is taken.

When it was introduced over 30 years ago, TIOXIDE® R-FC5 pigment met with immediate approval at a large number of compound producers. The main reasons for its success then and for the satisfaction that it continues to give today is due to its very high tinting strength and clean, blue undertone (Figure 2), properties that have been consistently maintained over the years.

TIOXIDE® R-FC5 pigment
- the grade that does more

Because of the large number of plastics resins that are now available, the choice for a given application will often involve a compromise between cost and performance. However, the versatility of TIOXIDE® R-FC5 pigment makes choosing a titanium dioxide pigment much less of a problem, as high tinting strength and opacifying power, combined with a clean blue tone make it suitable for most applications.

FIGURE 1

Dispersion in LDPE Masterbatch (60% TiO₂)

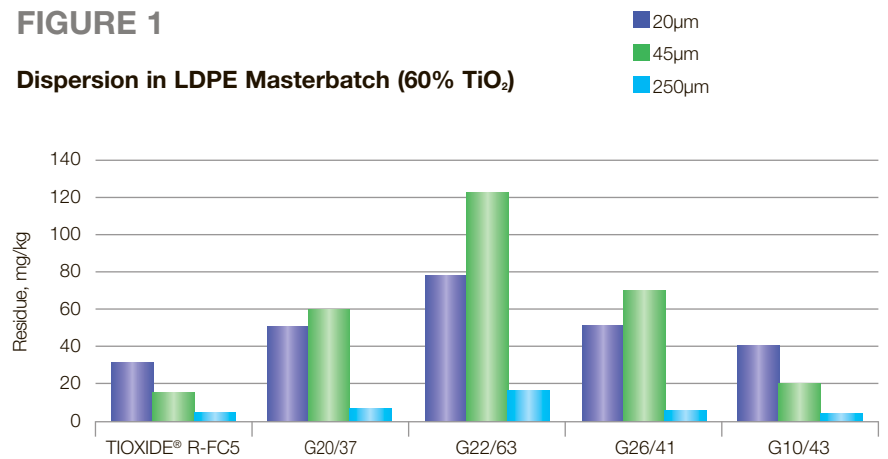
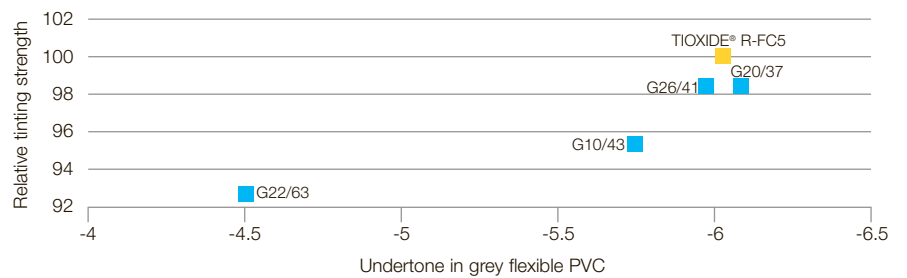


FIGURE 2

Tinting Strength & Undertone in Flexible PVC



Tioxide®

Titanium Dioxide Pigments



This leaflet is a general guide to the properties of TIOXIDE® R-FC5 pigment and its potential applications. More detailed information on TIOXIDE® R-FC5 pigment is available from Technical Service personnel within Huntsman Pigments.

Although all information is given in good faith, we do not guarantee the accuracy or completeness of information, or that TIOXIDE® R-FC5 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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PRINCIPAL APPLICATIONS	OUTSTANDING PROPERTIES
Polyethylene	Dispersibility, low reactivity with antioxidants
Rigid and flexible PVC	Dispersibility, opacity, self cleaning via chalking
ABS	Blue undertone offsets yellowness of polymer
Styrene polymers	Dispersibility, colour consistency, tint reduction
PVC plastisol (spread coatings)	Opacity, blue undertone to offset any yellowness in substrate, dispersibility
Engineering polymers	Low moisture pick-up, dispersibility
Rigid and flexible pipes	Dispersibility, tint reduction, NSF approved for potable water

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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