Product Information

Bayferrox® 316

Description

Type	Black pigment
Delivery form	Powder
Chemical class	Synthetic iron oxide Fe_3O_4
Colour Index	Pigment black 11 (77499)
CAS-No.	1317-61-9
REACH registration no.	01-2119457646-28-0000

Specification

Colour values and tinting strength			
Standard	Bayferrox 316		
Year	1998		
Binder: Test paste based on a non drying alkyd resin [46]	**Reduction** with titanium dioxide Tronox® R-KB-2 (1 : 5)[45]		**Test method** No. 001 of 1995-04-28 [41]
	min	**max**	
Δ a*	-0.7	0.7	
Δ b*	-0.9	0.9	
Δ E_{ab}*		1.0	
Relative tinting strength [%]	95	110	

Specification

Technical Data	**min**	**max**	**Test method**
water-soluble content [%]		0.8	as per DIN EN ISO 787-3:1995
Sieve residue (0.045 mm sieve) [%]		0.1	as per DIN 53195:1990
pH value	4	8	as per DIN EN ISO 787-9:1995

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Informative technical data (guide values)

					Test method
Fe_3O_4 Content [%][53]	>		96.7		information about the determination of iron oxide[41]
Loss on ignition at 1000 °C, 0.5 h [%] [5]	<		4.0		similar to DIN 55 913:1972, sheet 2
Moisture content (after production) [%]	<		3.0		as per DIN EN ISO 787-2:1995
Particle shape			spherical		Electron micrographs
Predominant particle size [µm]	~		0.3		Electron micrographs
Oil absorption [g/100 g]	~		21		as per DIN EN ISO 787-5:1995
Tamped density [g/ml]		0.9	-	1.3	as per DIN EN ISO 787-11:1995
Density [g/ml]	~		4.6		as per DIN EN ISO 787-10:1995

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Packaging

The product is available in sacks or bulk bags. For further information please ask your local contact or send an enquiry by e-mail to mailto: ipg.product-information@lanxess.com

Transport and storage

General storage conditions:	Protect against weathering. Store in a dry place and avoid extreme fluctuations in temperature.
Maximum storage temperature:	When storing large quantities of pigments, temperatures above 80 °C must be avoided as an alteration (oxidation) of the pigment may be caused by heat.
Special conditions for opened packaging:	Close bags after use to prevent the absorption of moisture and contamination.
Shelf life:	If stored under the correct conditions (no climatic influence, kept dry and no extreme fluctuations in temperature) our products have an excellent shelf life. However, due primarily to the limited durability of the packaging, we recommend that the product is used within 5 years of the date of manufacture and our product warranty is limited to this period. During the first five years after the date of manufacture we are able to ensure compliance with our specification, provided the material has been stored correctly and the packaging materials remain undamaged.

Safety

Classification	The product is not classified as dangerous under the relevant EC Directives and corresponding national regulations valid in the individual EU member states. It is not dangerous according to transport regulations. In countries outside the EU, compliance with the respective national legislation concerning the classification, packaging, labelling and transport of dangerous substances must be ensured.
Additional Information	The safety data sheet should be observed. This contains information on handling, product safety and ecology. The safety data sheet is available at www.bayferrox.de.

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Information concerning European food contact regulations (not specified)

This product complies with the purity requirements of the following legal regulations or is listed on the mentioned positive lists.

General remark

As the food contact regulations of each country may differ, it is the responsibility of the manufacturer of the finished articles to ensure compliance with the respective country's regulation (e.g. migration or extraction limits).

European Union (Council of Europe)	Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food. (requirements correspond with those of BfR Recommendation IX.)
Germany	Recommendation IX of the Federal Institute for Risk Assessment (BfR) dated 01. Jan 2010
Belgium	Koninklijk Besluit dated 11.5.1992; Warenwetgeving (1), aanvulling nr. 18 - September1992
France	Circulaire 176 dated 2.12.1959, published in the Journal Officiel of 30.12.1959 incl. amendments.
Netherlands	Warenwet/Regeling Verpakkingen - en gebruiksartikelenbesluit; Uitvoeringsvoorschriften CIII-55, entered into force on 21.8.1991. As well as defining the content of soluble heavy metals in pigments, this regulation specifies maximum permissible migration values for the pigmented articles.
Spain	Resolucion dated 4.1L1982 (BOE 282 of 24.11.1982) in accordance with Article 5 of Royal Decree 211/1992 of March 5, 1992. All colorants are permitted which conform with the migration values defined in Appendix III of the Resolucion. Pigments used in foodcontact applications must be notified to the Health Ministry. All Bayferrox pigments which satisfy BgVV Recommendation IX can be used in Spain.

Information concerning Non-European food contact regulations (not specified)

This product complies with the purity requirements of the following legal regulations, or is listed on the mentioned positive lists

General remark

As the food contact regulations of each country may differ, it is the responsibility of the manufacturer of the finished articles to ensure compliance with the respective country's regulation (e.g. migration or extraction limits)

Australia	Australian Standard 2070.6 (1984)
USA	According to § 178.3297 (Colorants for Polymers)

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Status of registration (not specified)

The components of this product are listed on the following inventories:				
Europe: EINECS	USA: TSCA	Canada: DSL	Australia: AICS	New Zealand: NZIOC
Philippines: PICCS	Japan: METI	Korea: ECL	China: IECSC	Taiwan: NECSI

[5] In iron oxide black pigments, a chemical transformation (oxidation) is also recorded when determing the loss on ignition.

[41]obtainable from LANXESS Deutschland GmbH, Business Unit Inorganic Pigments, Fax +49-2151-88-9599-4139, mailto: ipg.product-information@lanxess.com

[45]Colour values after matching of the tinting strength parameter Y, i.e. Δ L*=0

[46]similar to wet system DIN 55983:1983

[53]Minor elements may arise from the raw materials used. However, these are firmly bound to the crystal lattice as ions.

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