

Product Information

Bayferrox® 686

Description

Type	Brown pigment
Delivery form	Powder
Chemical class	Synthetic iron oxide (mixture)
Colour Index	Pigment red 101 (77491) / Pigment black 11 (77499)
CAS-No.	1309-37-1 / 1317-61-9
REACH	all components are registered

Specification

Colour values and tinting strength		
Reference	Bayferrox 686	
Powder standard	1995	
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
Δa^*	-1.0	1.0
Δb^*	-1.2	1.2
ΔE_{ab}^*		1.3
Binder: Barytes	95	105
Relative tinting strength [%]		Test method No. 003 of 1994-03-11 ⁴¹

Specification

Technical Data	min	max	Test method
water-soluble content [%]		1.2	as per DIN EN ISO 787-3:1995
Sieve residue (0.045 mm sieve) [%]		0.1	as per DIN 53195:1990
pH value	5.0	8.0	as per DIN EN ISO 787-9:1995

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Informative technical data (guide values)

		Test method
Content Fe ₂ O ₃ [%]	~ 92	as per DIN 55 913:1972, sheet 2
Content SiO ₂ + Al ₂ O ₃ [%]	< 3.0	as per DIN 55 913:1972, sheet 2
Loss on ignition at 1000 °C, 0.5 h [%] ⁸	< 4.0	similar to DIN 55 913:1972, sheet 2
Moisture content (after production) [%]	< 2.5	as per DIN EN ISO 787-2:1995
Particle shape	irregular	Electron micrographs
Predominant particle size [µm]	0.1 - 0.6	Electron micrographs
Oil absorption [g/100 g]	~ 22	as per DIN EN ISO 787-5:1995
Tamped density [g/ml]	0.8 - 1.2	as per DIN EN ISO 787-11:1995
Density [g/ml]	~ 4.8	as per DIN EN ISO 787-10:1995

⁸ In iron oxide brown pigments, a chemical transformation (dehydration and / or oxidation) is also recorded when determining 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. $\Delta L^* = 0$

⁴⁶ similar to wet system DIN 55983:1983

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Packaging

25-kg-bag
1000-kg-bulk bag

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.
Additional Information	In countries outside the EU, compliance with the respective national legislation concerning the classification, packaging, labelling and transport of dangerous substances must be ensured. 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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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	

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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 1994.06.01.
Belgium	Koninklijk Besluit dated 11.5.1992; Warenwetgeving (1), aanvulling nr. 18 - September 1992
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.
United Kingdom	Plastics for food contact applications, a code of practice for safety in use: BPF in connection with BIBRA, revised edition 1986. Like BfR Recommendation IX, this code does not have the force of law. However, processors view it as binding.
Italy	Decreto Ministeriale dated 21.3.1973, published in Gazzetta Ufficiale No. 104 of 20.4.1973; last amendment in Decreto Ministeriale No. 338 of 22.7.98.
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.

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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)