

48330 Iron Manganese Brown 645 T

Product Information

Type:	Brown pigment, with high thermal stability
Delivery form:	Powder
Chemical class:	Synthetic iron-manganese mixed oxide (Fe,Mn) ₂ O ₃
Color Index:	Pigment Brown 43 (77536)
CAS No.:	120062-81-6, 68186-94-7
REACH-Registration No:	01-2119457645-30

Specification

Color values and tinting strength

	<u>min.</u>	<u>max.</u>	<u>Test method</u>
Binder: test paste based on a non drying alkyd resin			
Fullshade			No. 001
ΔL^*	-0.5	0.5	
Δa^*	-1.2	1.2	
Δb^*	-1.3	1.3	
ΔC_{ab}^*	-1.2	1.2	
ΔH_{ab}^*	-1.2	1.2	
ΔE_{ab}^*		1.5	
Reduced shade with titanium dioxide (1:5)			
Δa^*	-1.2	1.2	
Δb^*	-1.3	1.3	
ΔC_{ab}^*	-1.2	1.2	
ΔH_{ab}^*	-1.2	1.2	
ΔE_{ab}^*		1.5	
Relative tinting strength (%)	95	110	

Technical Data:

	<u>min.</u>	<u>max.</u>	<u>Test method</u>
Water-soluble content (%)		0.8	DIN EN ISO 787-3:2000
Sieve residue (0.045-mm-sieve) (%)		0.1	DIN EN ISO 787-7:2009
pH-value	5.5	8.5	DIN EN ISO 787-9:1995

Informative Technical Data (standard values)

		<u>Test method</u>
(Fe,Mn) ₂ O ₃ content (%)	> 98.1	No. 037
MnO content (%)	< 9	DIN 55913-2:1972
Loss on ignition at 1000°C, 0.5h (%)	< 0,5	DIN EN ISO 787-2 :1995
Moisture content (after production) (%)	< 0.5	Electron microscope
Particle shape	spherical	Electron microscope
Predominant particle size (µm)	0.3	DIN EN ISO 787-5:1995
Oil absorption (g/100 g)	28	DIN EN ISO 787-11:1995
Tamped density (g/ml)	0.6 – 1.0	DIN EN ISO 787-10:1995
Density (g/ml)	4.5	

Transport and storage

Protect against weathering. Store in a dry place and avoid extreme fluctuations in temperature. Special conditions for opened packaging: Close bags after use to prevent the absorption of moisture and contamination.

Maximum storage temperature:

During storage, temperatures above 80°C are to be avoided since irreversible changes in the color of the pigment can occur.

Shelf life: This product has an excellent shelf life. We recommend that this product is used within ten years of the date of manufacture and limit our product warranty to this period.

Safety

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.

The information contained in the safety data sheet must be observed. This contains information on handling, product safety and ecology.

Information concerning Food Contact Regulations

This product complies with the regulatory requirements listed hereafter or may be used in accordance with those.

Remarks:

We can only refer to regulations dealing directly with pigments or colorants. The compliance with laws and regulations dealing with the finished article lies completely in the responsibility of the manufacturer of those articles.

Council of Europe:	Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food
Germany:	BfR IX Empfehlung IX des Bundesinstituts für Risikobewertung (BfR) vom 01.06.2019
Italy:	Decreto Ministeriale des 21/03/1973. Disciplina igienica degli imballaggi, recipienti, utensil, desinati a venire in contatto con la sostanza alimentaria o con sostanze d'uso personale.
Netherlands:	Warenwetregeling verpakkingen en gebruikartikelen: Regelung von de Minister van Volksgezondheid, Welzijn van 14 maart 2014, kenmerk 328583-117560-VGP, houdende vaststelling van de Warenwetregeling verpakkingen en gebruikartikelen die in contact komen met levensmiddelen.
Spain:	Real Decreto 847/2011, de 17 de junio, por el uso que se establece la lista positiva de sustancias permitidas para la fabricación de materiales poliméricos destinados a entrar en contacto con los alimentos.
Australia:	AS 2070-1999 Plastic materials for food contact use
Brazil:	RDC N° 52 Dispõe sobre corantes em embalagens e equipamentos plásticos destinados a estar em contato com alimentos.
China:	Yellow iron oxides listed in GB 9685-2016 with FCA numbers 0460 & 0461. For detailed information about limitations itself refer to the standard itself.
Japan:	JHOSPA This product complies with Japanese Food sanitation law amended in June 2020. As there is no specific positive list for pigments the JHOSPA list for pigments remains valid until further announcement.
MERCOSUR:	GMC/RES. N° 15/10 Reglamento técnico Mercosur sobre colorantes en envases y equipamientos plásticos destinados a estar en contacto con alimentos



USA: This product may be used for the coloring of plastics up to 2% in all approved polymers.

Status of Registration

The components of this product are listed in the following inventories:

EINECS (Europe), TSCA (USA), DSL (Canada), AICS (Australia), NZIoC (New Zealand)
PICCS (Philippines), ENCS + ISHL (Japan), ECL (Korea), IECSC (China), NECSI (Taiwan)