



QUALITY CERTIFICATE  
**MICRONOX® BR-01**

Date of dispatch: 23/06/2020  
Batch: 1166 ON90  
Quantity: 2.1 TONS  
Ref: PVE/20/0258  
Order: ORDER 10

**PRODUCT DESCRIPTION**

Type Brown pigment  
Delivery form Powder  
Chemical description Iron oxide ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> + Fe<sub>3</sub>O<sub>4</sub>)

**TECHNICAL SPECIFICATIONS**

Property	Value	Unit	Max	Min	Test method
Fe <sub>2</sub> O <sub>3</sub> + Fe <sub>3</sub> O <sub>4</sub> content	86.7	%	-	85	ISO 1248 Método A
Humidity	0.33	%	1.0	-	ISO 787-2
Residue on sieve of 45 µm	≤0.01	%	0.1	-	ISO 787-7
Average particle size	1.51	µm	1.65	1.25	ISO 13320-1
Maximum particle size	10.00	µm	10.00	-	ISO 13320-1
Specific surface area	18.9	m <sup>2</sup> /g	20	18	ISO 13320-1
Water soluble salts (Cl <sup>-</sup> + SO <sub>4</sub> <sup>2-</sup> )	≤0.01	%	0.1	-	ISO 787-13
pH of aqueous suspension	7.7	-	9	7	ISO 787-9
Specific gravity	4.7	g/cm <sup>3</sup>	4.8	4.6	ISO 787-10
Bulk density	1.0	g/cm <sup>3</sup>	1.1	0.9	ISO 787-11
Relative tinting strength	100	%	105	95	ISO 787-16
ΔE* CIElab parameter	0.79	-	1.5	-	ISO 787-1

**EC DECLARATION OF CONFORMITY UNE-EN 12878:2007**

Certificate registration No.: 1239/CPD/0807001

**Pigment for a concrete, mortar and grout.**

Pigment for the colouring of building materials based on cement and/or lime for building materials belonging to category B.

Properties	Tests according to norms	Results
Setting time-initial	EN 196-3	234 min
Compressive strength (28 days)	EN 196-1	52.6 N/mm <sup>2</sup>
Soluble chlorides	ISO 787-13	≤0.01%
Total chlorine	ISO 1158	<0.1%
Loss on ignition	EN 196-2	4.0%
Water soluble substances	ISO 787-3	0.2%
Heat resistance	EN 12878	150 °C
Weathering resistance	EN 12878	Excellent
Alkaline stability	EN 196-1	Excellent
Lightfastness	ISO 12040	BWS = 8 (excellent)

