

# Product data sheet

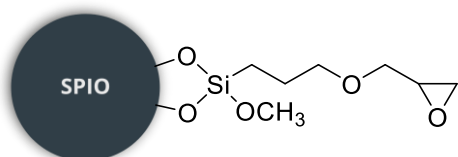
**Name of the product:** SPIO-Epoxy, suspended in deionised water, 5 mg/mL or powder

**Guarantee:** 6 months in suspension or 1 year in powder from manufacture, under the specified storage conditions.

**Product number:** SP1GL12

**Storage:** 4 – 25°C. DO NOT FREEZE.

**Product representation :**



**Usage:** Ensure the nanoparticles are well dispersed in the medium prior to use.

In **suspension**, shake vigorously before use, bath sonication is strongly recommended.

In **powder**, to use in suspension, bath sonication is needed.

## Product specifications:

Property	Unit	Specifications	
		Min.	Max.
Characterization technique			
Appearance (Back or brown powder)	-	-	-
Visual Inspection			
Magnetic	-	-	-
Test with magnet			
Presence of the molecule at the surface	-	-	-
Infrared analysis (IR)			
Loading of -Epoxy at the surface of the nanoparticles	Nb*/nm <sup>2</sup>		
Thermogravimetric analysis (TGA)	Nb*/nm <sup>2</sup>	0.5	5
Isoelectric point (pH)	pH	5.5	7.5
Zetametry			
Zeta potential at physiological pH (pH =7,4)	mV	-5	-30
Zetametry			
Phase of SPIO (Magnetite)	-	-	-
X-ray Diffraction (XRD)			
Crystallite size	nm	10	20
X-ray Diffraction (XRD)			
Mesh parameter	Å	8.370	8.390
X-ray Diffraction (XRD)			
Oxygen stoichiometry	-	0	0.111
X-ray Diffraction (XRD)			
Fe <sup>2+</sup> /Fe <sup>3+</sup> ratio	-	0	50
X-ray Diffraction (XRD)			
Mean particle size	nm	10	20
Transmission Electron Microscopy (TEM)			

\*Nb = number of molecules