



MicroNox

MicroNox, developed to be added directly to Anaerobic Digesters, effectively removing H₂S from the biogas.

Benefits of MICRONOX ON16

- Avoids toxicity and physical risks:** MICRONOX ON 16 is a product that is not harmful to people, equipment or the environment.
- Absence of risk of explosive mixtures:** Makes the injection of oxygen unnecessary.
- Minimizes corrosion damage:** Reduces equipment maintenance costs.
- Safe and clean handling:** Can be added simply without the need for complicated dosing systems.
- Cheaper and more efficient desulfurization:** Not only is MICRONOX ON 16 an effective method of capturing H₂S, but it also improves reactor productivity.
- Improves compost characteristics:** The use of MICRONOX ON 16 does not generate any toxic by-products, and produces iron sulfide and sulfur, which are components that improve the properties of fertilizers.

Advantages of MICRONOX ON16

Comparative table on the efficiency of different methods of desulfurization

	MICRONOX ON 16	IRON CHLORIDE	BIOLOGICAL DESULFURIZATION
Corrosivity	✓✓✓	XXX	XXX
Harmful substances	✓✓✓	XXX	✓✓✓
Methane concentration	✓✓✓	✓✓	XX
Handling	✓✓	XXX	✓✓
Friendly with the bacterial chain	✓✓✓	XX	XX
Efficiency	✓✓✓	✓✓✓	✓✓
Risk of explosion	✓✓✓	✓✓✓	X
Buffer effect	✓✓✓	XXX	XXX
Undesirable reaction product	None	Hydrochloric acid	Sulfuric acid





Description

Type	Technical oxide
Delivery form	Powder
Chemical class	Mixture of iron oxides and iron hydroxides
CAS-No	20344-49-4/1317-60-8

Properties

Natural origin
 Micronized material
 High specific surface
 High reactive and efficiency

Applications

Biogas desulfurization
 Elimination / capture H₂S

INFORMATIVE TECHNICAL DATA (guide values)

Typical Chemical Analysis (ICP-OES)

Oxides	% Weight
FeOOH+Fe ₂ O ₃	70-73
Fe (total)	44.0-45.8
SiO ₂	13-15
Al ₂ O ₃	4-6
MnO ₂	2-3
MgO	1.5
K ₂ O	0.5-1.5
CaO	0.3-0.1
Na ₂ O	<0.05
Cr ₂ O ₃	<0.005

Mineralogical Analysis (DRX)

Oxides	Formula	Weight %
Goethite	FeOOH	63-65
Hematites	α-Fe ₂ O ₃	7-10
Mica-group minerals	(K,Na)(Al,Mg,Fe) ₂ ((Si,Al) ₄ O ₁₀)(OH) ₂	7-8
Quartz	α-SiO ₂	8-9
Amorphous		13-15

Granulometric Distribution (Laser diffraction)

Average particle size (µm): 2.00 (±0.20)
 Maximum particle size (µm): 10.00 (±0.10)

BET:
 44.8 m²/g

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