

Technical Data Sheet

Company Name: BTLnewmaterial **Email:** lixifirm@outlook.com **Phone:** +8618273793022 **Website:** manganesesupply.com

Product Description

Manganese Dioxide for VOCs Catalytic Combustion is a high-activity MnO₂ catalyst grade with purity $\geq 85\text{--}95\%$, designed for low-temperature oxidation of volatile organic compounds. It is optimized for catalytic combustion systems in industrial exhaust treatment, offering stable conversion efficiency and long service life under continuous operation.

Technical Specifications

Parameter	Typical Range
MnO ₂ Content	85% – 95%
Crystal Form	$\gamma\text{-MnO}_2$ / Activated MnO ₂
Surface Area (BET)	80 – 250 m ² /g
Bulk Density	0.4 – 0.8 g/cm ³
Particle Size	20–80 mesh / powder (<75 μm)
Moisture	$\leq 2.0\%$
Ignition Temperature (VOCs)	180 – 350°C (depending on VOC type)
Shape Options	Powder / Granule / Extrudate
Thermal Stability	Up to 500°C continuous

Key Features

- High catalytic activity for VOCs Catalytic Combustion systems at relatively low temperatures
- Large specific surface area for improved VOC adsorption and oxidation efficiency
- Stable crystal structure with strong resistance to thermal sintering
- Suitable for coating onto ceramic honeycomb or metal substrates
- Low pressure drop when supplied in granule or extruded form
- Consistent batch quality for industrial-scale exhaust treatment units

Applications

- Industrial exhaust gas treatment: Effective for catalytic oxidation of toluene, xylene, ethanol, acetone, and other VOCs in reactors
- Paint and coating lines: Controls solvent emissions from spray booths and drying ovens
- Petrochemical facilities: Reduces hydrocarbon emissions from storage and processing units
- Printing and packaging plants: Suitable for solvent-based ink exhaust purification
- Chemical manufacturing: Oxidation of mixed VOC streams in continuous catalytic combustion systems

Packaging & Supply

- 25 kg woven bags with inner PE liner
- 500 kg – 1000 kg jumbo bags
- Drums available for catalyst-grade powder

Export-ready packaging compliant with international shipping standards. Suitable for sea and air freight. Standard HS Code: 28201000.

Customization & Technical Support

MnO₂ content, surface area, particle size, and shaping method can be adjusted according to reactor design and VOC concentration.

Technical support includes catalyst selection guidance, operating temperature optimization, and compatibility evaluation with ceramic or metallic carriers. Pilot sample supply available for performance validation.