

**Chemical Name:** Tricarbonyl (methylcyclopentadienyl) manganese (MMT)

**Type:** Antiknock agent/Octane Number Improver

**Molecular Weight:** 218.09

**CAS No.:** 12108-13-3

**Formula:** C<sub>9</sub>H<sub>7</sub>Mn

**Property:** This product is mainly about MMT, it composite detergent-dispersants, antioxidants, and cosolvent in certain temperature and processing conditions to green environmental gasoline additives. It can react with RCOOH generated normal alkanes and oxidation, interrupt the reaction generated by ring olefins and bolymer olefins. Thus generating aldehydes and ketones or other epoxy cures, it is applicable to various gasoline concocting components and etc, raise gasoline antiknock properties.

**Specification:**

Item	Index	
Appearance	Orange transparent liquid	Orange transparent liquid
Manganese content(20°C)	24.4m/m min	15.1m/m min
Density(20°C)	1.36-1.38g/m <sup>3</sup>	1.10-1.12g/m <sup>3</sup>
Purity	98% min	98% min
Moisture	200mg/kg max	200 mg/kg max
Freezing point (initial)	-1 °C max	-22 °C max
Flash point of closed entry	80°C min	30°C min
Solubility	Freely soluble	Freely soluble

**Handling and Storage**

**Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

**Application:**

(1) MMT can increase the gasoline octane number

In one ten thousandth of gasoline by adding MMT, the manganese content of not more than 18mg / L, can increase gasoline octane number of 2 to 3 units.

(2)MMT can increase in vehicle power and reduce fuel consumption

By the Ministry of Transportation motor transport industry and energy use monitoring center showed that the engine test aircraft: MMT additions of 90 # unleaded gasoline with non-MMT # 90 compared to unleaded petrol, the engine power and performance to lower fuel consumption.

(3) with oxygen, such as MTBE and ethanol were good with the group of

MMT and MTBE, the octane number of ethanol to improve with better adduct, which provided for the production of high-grade gasoline convenience.Can meet the higher octane number, and avoid the use of MTBE due to excessive performance degradation caused by excessive automobile power, and can meet the "oxygen content not more than 2.7 percent" of the national standards.

(4) MMT can reduce pollutants in automobile exhaust emissions

MMT additions of 90 # unleaded petrol and non-PPD 90 # unleaded gasoline in the exhaust gas compared to CO decreased 17.7%, HC decreased 18.2%.

(5) , motor vehicle exhaust catalytic converters to improve the role of

Phosphorus is recognized as toxic catalysts, MMT combustion to remove phosphorus and reduce the catalytic converter on the

**Address:**

HX707, 108 LAODONG ROAD WEST, CHANGSHA, HUNAN, CHINA

Tel: 0086 731 85595457/85518147

Fax: 0086 731 85530 767/5518 167

**Conditions for safe storage**, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Specific end uses** no data available



sediment, so the use of MMT fuel to extend the life of the catalyst, the catalyst to maintain a high conversion rate, so as to more effectively into the harmful gases, reduce pollutant emissions.

(6) MMT can improve refinery operations

- 1.reduce the reformer operating severity
2. reduce the aromatics content in gasoline
- 3.reduce the olefin content in gasoline
- 4.reduce the demand for crude oil

(7) MMT can increase the flexibility of blending oil

Through the rational use of MMT, MTBE, gasoline reforming, catalytic gasoline and straight-run out of petrol to the petroleum products of various specifications.

THE REFERENCEDOSAGE:When 90# gasoline adjustment to 97 # gasoline,Usage proportion is 2%-3% (V/V);can reduce fuel consumption 10%-15%.The reference dosage:0.1-0.13%(v/v)

**Package:** Packed in 220kg galvanization Iron drum.



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