



Material Safety Data Sheet

In accordance with 91/155/EEC

Printed on: 08 Jan. 2010

Revised on: 18 Jan. 2010

1. NAME OF SUBSTANCE/PREPARATION AND COMPANY

Product details: Octane Booster and Emissions reducer for unleaded gasoline

Trade name: Cyclopentadienyl Manganese Tricarbonyl (CMT)

Manufacturer details:

TDS Chemical Corp., Ltd.

Plant: No.2 Waisha Industry Zone, Jiaojiang, Taizhou, Zhejiang 318000, China.

Tel: +86-21-6495 5601, 6495 5602, 6495 5603,

Fax: +86-21-6495 5604,

Emergency telephone number:

Telephone: (+86) 21 6495 5601 (Mon. - Fri. 09.00 am - 18.00 pm)

Telephone: (+86) 186-0177 9000 (outside office hours)

FOR CHEMICAL EMERGENCY DURING TRANSPORTATION

International emergency responses 1.352.323.3500 call INFOTRAC collect.

These numbers are used for leaks, fires and medical emergencies involving human and animals. 24 Hrs. per day, 7 days per week

For domestic within the USA please use 1.800.535.5053.

2. COMPOSITION / DETAILS OF CONSTITUENTS

Chemical name:

Cyclopentadienyl Manganese Tricarbonyl (CMT)

CAS No.

12079-65-1

Molecular Weight

204.07

Chemical Formula

$C_5H_5Mn(CO)_3$

Index value

Test Items	Unit	Standard
Appearance		Yellow crystal
Manganese	%	26%
Density(20°C)	g/ml	---
Melting point	<°C	Asymp~77
Flash point	>°C	----
Solubility	Gasoline	Easily soluble
C,H content	%	°C~47
	%	H~2.45

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3. STABILITY AND REACTIVITY:

Chemical Stability	Not available
Conditions to Avoid	Incompatible materials, exposure to air
Incompatibilities with Other Materials	Strong oxidizing agents, halogens
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide
Hazardous Polymerization	Has not been reported

4. HAZARDS IDENTIFICATION**Emergency Overview** Very toxic by inhalation, in contact with skin and if swallowed. Air sensitive.**Potential Health Effects / Personal Protective Equipment**

Eye	May cause eye irritation
Skin	May cause skin irritation. May be fatal if absorbed through the skin
Ingestion	May be fatal if swallowed
Inhalation	May be fatal if inhaled. May cause respiratory tract irritation
Chronic	Not available

First Aid Measures

Eye	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion	Get medical aid immediately. Wash mouth out with water
Inhalation	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to physician	Not available

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5. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State	Crystal
Appearance	Yellow
Odor	Not available
PH	Not available
Vapor Pressure	Not available
Viscosity	Not available
Boiling Point	Not available
Melting Point	74-78°C
Autoignition Temperature	Not available
Flash point	Not available
Evaporation Limits, lower	Not available
Evaporation Limits, upper	Not available
Decomposition Temperature	Not available
Solubility in water	Insoluble
Specific Gravity / Density	Not available
Molecular Formula	C ₅ H ₅ Mn(CO) ₃
Molecular Weight	204.7

6. FIRE AND EXPLOSION DATA:

General Information	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/MIOSH (approved or equivalent), and full protective gear.
Extinguishing Media	In case of fire, use water spray, dry chemical, chemical foam, carbon dioxide, or chemical foam.
Flash Point	Not available
NFPA Rating	Not published
Explosion Limits, Lower	Not available
Upper	Not available

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7.	<u>EXPOSURE CONTROLS, PERSONAL PROTECTION</u>
Engineering Controls	Use adequate ventilation to keep airborne concentrations low. Personal Protective Equipment
Eyes	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin	Wear appropriate protective gloves to prevent skin exposure.
Cloting	Wear appropriate protective clothing to prevent skin exposure.
Respirators	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
8.	<u>HANDLING AND STORAGE:</u>
Handling	Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.
Storage	Store in a cool, dry place. Store in a tightly closed container
9.	<u>TOXICOLOGICAL INFORMATION:</u>
RTECS#:	CAS# 12079-65-1: OO9720000
LD50/LC50:	CAS# 12079-65-1: Oral, mouse: LD50 = 150 mg/kg; Oral, rat: LD50 = 22 mg/kg.
ACGIH, IARC, NIOSH, NTP, or OSHA	Not listed
10.	<u>ECOLOGICAL INFORMATION:</u>
Environmental Fate	Not available
Environmental Toxicity	No available
11.	<u>DISPOSAL CONSIDERATIONS:</u>
Dispose of in a manner consistent with federal, state, and local regulations.	
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12. TRANSPORT INFORMATION:**IATA**

Shipping Name	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class	6.1
UN Number	2811
Packing Group	II

IMO

Shipping Name	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class	6.1
UN Number	2811
Packing Group	II

RID/ADR

Shipping Name	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class	6.1
UN Number	2811
Packing Group	II

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13. **REGULATORY INFORMATION:**

European Labeling in Accordance with EC Directives

Hazard Sybols T+

Risk Phrases R 26/27/28 Very toxic by inhalation, in contact with skin and ifswallowed.
S 28A After contact with skin, wash immediately with plenty of water.S

Safety Phrases 36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 12079-65-1: No information available.

United Kingdom Occupational Exposure Limits

CAS# 12079-65-1: OES-United Kingdom, TWA 0.1 mg/m3 TWA (as Mn)

CAS# 12079-65-1: OES-United Kingdom, STEL 0.3 mg/m3 STEL (as Mn)

United Kingdom Maximum Exposure Limits

Canada CAS# 12079-65-1 is listed on Canada's NDSL List.

CAS# 12079-65-1 is listed on Canada's Ingredient Disclosure List.

Exposure Limits CAS# 12079-65-1: OEL-AUSTRALIA:TWA 0.1 mg/m3;Skin

OEL-BELGIUM:TWA 0.1 mg/m3;Skin

OEL-DENMARK:TWA 0.1 mg/m3;Skin

OEL-FINLAND:TWA 0.1 mg/m3;STEL 0.3 mg/m3;Skin

OEL-FRANCE:TWA 0.1 mg/m3;Skin

OEL-THE NETHERLANDS:TWA 0.1 mg/m3;STEL 0.3 mg/m3;Skin

OEL-RUSSIA:STEL 0.1 mg/m3

OEL-SWITZERLAND:TWA 0.1 mg/m3;Skin

OEL-UNITED KINGDOM:TWA 0.1 mg/m3;STEL 0.3 mg/m3;Skin

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH

TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA CAS# 12079-65-1 is listed on the TSCA inventory.

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14. OTHER INFORMATION

This data is based on our current level of knowledge but does not constitute an assurance of product properties and does not justify a contractual legal relationship. And the information above is believed to be accurate and represents the best information currently available to TDS Chemical Corp., Ltd. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

The product is **only** for commercial processing / use.

Further information:

Manufacturer details:

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Tel: +86-21-6495 5601, 6495 5602, 6495 5603,

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Department publishing:

This data sheet

Safety department

Contacts

Mr. Quangen Zhou

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