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## MATERIAL SAFETY DATA SHEET

In Case of Emergency Call: CHEM-TEL 1-800-255-3924

### SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Issue Date: 1/02/06

Product Name: MAX OCTANE

Reference Number HPF-700

### SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Names	CAS No.	Exposure Limit
Petroleum Distillates Stoddard Solvent	Mixture 8052-41-3	OSHA (PEL) TWA: 500 ppm OSHA/ACGIH: TWA 100 ppm TWA:500ppm(PEL) Inhalation
Benzene, 1,3,5 Trimethyl	108-67-8	ACGIH: TWA 100 ppm
Benzene, 1,2,4 Trimethyl	95-63-6	ACGIH: TWA 25 ppm
Methylcyclopentadienyl Manganese Tricarbonyl	12108-13-3	OSHA/ACGIH: 0.2 mg/m <sup>3</sup> TWA* skin
Xylene	1330-20-7	OSHA/ACGIH: 100 ppm TWA 150 ppm STEL
Cumene	98-82-8	OSHA/ACGIH: 50 ppm TWA,skin
Manganese Cyclopentadienyltricarbonyl	12079-65-1	
Petroleum naphtha	64742-88-77	TWA: 100 ppm STEL: 200ppm
Propoxylated alcohol	Proprietary	Not Established
Polyolefin amine	Proprietary	Not established
Trimethylbenzene	25551-13-7	TWA: 25 ppm, STEL 25 ppm
n-Nonane	111-84-2	TWA: 200 ppm OSHA/ACGIH
n-Octane	111-65-9	OSHA/ACGIH TWA:300ppm, STEL:375 ppm
Ethylbenzene	100-41-4	(OSHA/ACGIH) 125 ppm STEL, 100 ppm TWA

### SECTION 3 HAZARDS IDENTIFICATION

#### Summary of Hazards:

#### **COMBUSTIBLE**

Toxic by inhalation, ingestion and skin absorption. See "Chronic Effects of Overexposure" and "Other Health Effects".

**Exposure Effects:**

**Target Organs:** May cause damage to the following organs: blood, kidneys, lungs, liver, gastrointestinal tract, upper respiratory tract, eyes, central nervous system (CNS).

**Inhalation:** Irritating to respiratory systems. Expected to be toxic. See "Chronic Effects of Overexposure".

**Eye Contact:** Not expected to be an eye irritant.

**Skin Contact:** Expected to be toxic by dermal absorption. See "Other Health Effects".

**Ingestion:** Expected to be toxic. Aspiration hazard if swallowed- can enter lungs and cause damage.

**Chronic Exposure Effects:**

**MMT:** A 90 day chronic inhalation study of MMT indicated that 3 mg/m<sup>3</sup> of MMT showed detectable effects in mice. The lungs appear to be the organ most sensitive to MMT both acutely and chronically.

**Benzene, 1,3,5 Trimethyl-:** Adverse symptoms may include: blood system effects.

**Benzene, 1,2,4, Trimethyl:** Adverse symptoms may include: blood system effects.

**Xylene:** Adverse symptoms may include: Central nervous system, liver, kidneys, eyes and blood effects by inhalation.

**Other Health Effects:** Dermal exposure to this product may cause central nervous system stimulation. Literature data indicate that this product may also cause cardiac stimulation in the laboratory animal when given by IV.

**SECTION 4 FIRST AID MEASURES**

**Emergency and First Aid Procedures:**

Remove from contaminated atmosphere. If not breathing, administer artificial respiration. Remove contaminated clothing. Flush affected areas with water. If swallowed, do not induce vomiting - seek medical attention immediately.

**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

**Skin Contact:** Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention. Expected to be toxic by dermal absorption.

**Inhalation:** Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

**Ingestion:** INDUCE VOMITING by sticking finger in throat. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person. Expected to be toxic.

**Note to Physician:** Treat symptomatically.

**SECTION 5 FIRE-FIGHTING MEASURES**

Flashpoint: 107° F PMCC  
Flammable Limits: Not Established

**General Hazard:** Flammable fluids can form combustible mixtures at temperatures at or above the flashpoint. Toxic gases will form upon combustion. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner, or properly disposed of.

**Fire Fighting:** Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Use foam, dry chemical, or water spray to extinguish fire. Respiratory and eye protection required for fire fighting personnel. Avoid spraying water directly into storage containers due to danger of boilover. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

**Decomposition Products Under Fire Conditions:** Fumes, smoke, oxides of nitrogen, and carbon monoxide, aldehydes and other products of incomplete combustion.

**Hazardous Thermal Decomposition Products:** carbon oxides (CO, CO<sub>2</sub>), and some metallic oxides.

**Unusual Fire and Explosion Hazards:** Toxic fumes, gases or vapors may evolve on burning. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Container may rupture on heating.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Land Spill:** Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedure; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15 REGULATORY INFORMATION) notify the National Response Center. Prevent Liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

**Water spill:** Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Remove from surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

## SECTION 7 STORAGE AND HANDLING

**Electrostatic Accumulation Hazard:** None, but use proper grounding procedure.

**Storage and Handling:** Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. DO NOT handle or store near an open flame, heat, or other ignition sources. Protect material from direct sunlight. DO NOT

pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning.

**Additional Precautions or Comments:** For information on the disposal of contaminated soil, contact our local representative. All containers and equipment that have been in contact with this product should be decontaminated by rinsing with a solvent such as kerosene, diesel fuel or light fuel oil and followed by thorough washings with soap and water. All rinsate should be contained, recovered and disposed of as an industrial waste. If absorbent materials (e.g. wood) becomes soaked with this product, it should be removed and disposed of as industrial waste.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Controls:** Ventilation should be provided to control worker exposures and prevent health risk.

**Personal Protection:** For open systems where contact is likely, wear long sleeves, chemical resistant gloves, and chemical goggles. Where contact may occur, wear long sleeves and safety glasses with side shields. Where overexposure by inhalation may occur and engineering, work practice or other means of exposure reduction are not adequate, approved respirators may be necessary.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: 0.97

Appearance: Amber Colored Liquid

Solubility in water: Insoluble

Odor: Aromatic Hydrocarbon

## SECTION 10 STABILITY AND REACTIVITY

**Stability:** The product is stable. MMT is extremely photosensitive and decomposes rapidly when exposed to light. Photolytic action converts the organic compound to a mixture of non-hazardous manganese oxides, carbonates and organics derived from methylcyclopentadiene. These decomposition products are less toxic than the neat MMT.

**Hazardous Polymerization:** None.

**Materials to Avoid:** Strong acids, strong oxidizing and reducing agents.

**Conditions to Avoid:** Exposure to extreme heat or open flame.

## SECTION 11 TOXICOLOGICAL INFORMATION

**Inhalation:** Expected to be irritating to respiratory tract. Symptoms of overexposure to vapors include drowsiness, weakness, headache, dizziness and nausea, stupor and other central nervous system effects leading to visual impairment, difficulty breathing and convulsions. Exposure to a high concentration of vapor or mist is irritating to the respiratory tract. Breathing of vapor or mist may aggravate asthma and inflammatory or fibrotic pulmonary disease.

**Eye Contact:** Moderate to strong eye irritation.

**Skin Contact:** Expected to be a skin irritant. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

**Ingestion:** Expected to be irritating. Aspiration is expected to cause lung injury. Symptoms of overexposure include nausea, dizziness, vomiting, diarrhea, abdominal pain and gastrointestinal irritation. Ingestion may cause CNS depression.

**Chronic Effects of Overexposure:** Repeated overexposure to petroleum naphtha can cause nervous system damage. Prolonged or repeated overexposure to petroleum naphtha may cause liver and kidney damage. This product contains xylene. Literature data indicate xylene causes central nervous system effects, anemia, liver and kidney effects, and eye damage after repeated or prolonged oral, dermal or inhalation exposure. Literature data also indicates that xylene causes cardiac stimulation and arrhythmia (irregular heart beat) in the laboratory animal.

**Toxicity Data MMT:** ORAL LD50 (rat) = 175 mg/kg. DERMAL LD50 (rabbit) = >2000. INHALATION LC50 (rat) = >19.8 mg/L/1h.

**SECTION 12 ECOLOGICAL INFORMATION**

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Xylene	Goldfish	24 hours	13.4 ppm
Cumene	Fathead Minnow	96 hours	6.32 mg/l
	Magna	48 hours	0.6 ppm
MMT mg/l	Fathead Minnow	96 hours	0.21 to 0.34
	Magna	24 hours	.94 mg/l
	Magna	48 hours	.83 mg/l

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Disposal Methods:** As a waste, this product is hazardous under federal regulations in effect as of this MSDS issue date. It must be disposed of in a permitted hazardous waste facility in compliance with applicable local, state, and federal regulations. It should be handled in a manner acceptable to good waste management practice. This product is a hazardous waste due to the toxicity characteristic for benzene. See the Regulatory Information at the back of the MSDS for reportable quantity (RQ). This product is a hazardous waste due to the ignitability characteristic. See the Regulatory Information at the back of the MSDS for the reportable quantity (RQ).

**SECTION 14 TRANSPORTATION INFORMATION**

Department of Transportation (DOT): Flammable Liquid, Toxic N.O.S. (Methylcyclopentadienyl Manganese Tricarbonyl, 1,2,4 Trimethylbenzene, Petroleum Naphtha, Xylene), 3, UN 1992, PG III.

Note 1: See CERCLA for Reportable Quantity

Note 6: This material is a Marine Pollutant.

This DOT description is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

**SECTION 15 REGULATORY INFORMATION**

TSCA: Components of this product are listed or exempted.

Hazard Categories for SARA 311/312 reporting are indicated below:

Health	Immediate (Acute)	Yes
Health	Delayed (Chronic)	Yes
Physical	Fire	Yes

Physical	Sudden Release of Pressure	No
Physical	Reactive	No
	Nuisance Mist/Dust Only	No

Discharge or spills which produce a visible sheen on either surface water or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800 424 8802.

This information may be subject to the provisions of the Community Right-to-Know Reporting Requirements (40 CFR 370) if threshold quantity criteria are met. This product does not contain Section 313 Reportable Ingredients.

**Hazardous Components Present:**

COMPONENT NAME	CAS #	PERCENTAGE
Petroleum Distillates	Mixture	<24.0%
Stoddard Solvent	8052-41-3	<12.0%
1,3,5 Trimethylbenzene,	108-67-8	< 4.0%
Petroleum naphtha	64742-88-77	<35.0%
Propoxylated alcohol	Proprietary	<15.0%
Polyolefin amine	Proprietary	<15.0%
Trimethylbenzene	25551-13-7	< 6.0%
n-Nonane	111-84-2	< 3.0%
n-Octane	111-65-9	< 1.0%
Manganese Cyclopentadienyltricarbonyl	12079-65-1	< 0.5%
Methylcyclopentadienyl manganese tricarbonyl	12108-13-3	<50.0%
SARA 302 --- RQ = 100, LTPQ = 100, HTPQ = 100		
1,2,4 Trimethylbenzene	95-63-6	< 4.0%
Cumene	98-82-8	< 0.5%
CERCLA---RQ=500		
Ethylbenzene	100-41-4	< 0.1%
CERCLA---RQ=1000		
Xylene	1330-20-7	< 1.0%
CERCLA---RQ=100		

Non-proprietary regulated chemicals listed in this section are components of complex mixtures.

Reportable quantities (RQs) are correct as of this MSDS issue date. However, because RQs are revised periodically, verification of the RQs is recommended when determining whether a reportable release has occurred.

**TSCA: Components of this product are listed on the TSCA Inventory**

Discharge or spills which produce a visible sheen on either surface water or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800 424 8802.

This information may be subject to the provisions of the Community Right-to-Know Reporting Requirements (40 CFR 370) if threshold quantity criteria are met. This product does not contain Section 313 Reportable Ingredients.

**SECTION 16 OTHER INFORMATION**

**Hazard Rating Systems: This information is for people trained in:**

**National Paint & Coatings Association's (NPCA)  
Hazardous Materials Identification System (HMIS)  
National Fire Protection Association (NFPA 704)  
Identification of the Fire Hazards of Materials**

	<b>NPCA-HMIS</b>	<b>Key</b>
<b>Health</b>	<b>2</b>	<b>4=Severe</b>
<b>Flammability</b>	<b>2</b>	<b>3=Serious</b>
<b>Reactivity</b>	<b>0</b>	<b>2=Moderate</b>
		<b>1=Slight</b>
		<b>0=Minimal</b>