



MATERIAL SAFETY DATA SHEET

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MSDS: FUEL ADDITIVE – OCTANE BOOSTER (ON-ROAD)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FUEL ADDITIVE – OCTANE BOOSTER (ON-ROAD)

Synonyms:

CHAMPION® OCTANE BOOSTER

Company Identification

Champion Brands, L.L.C., 1001 Golden Drive, Clinton, MO 64735

PHONE: 800-821-5693 WEBSITE: www.championbrands.com

CAS Registry Number	Not Applicable
Generic/Chemical Name	Mixture
Product Type	Gasoline Fuel Additive
Preparation Date	December 4, 2006

Transportation Emergency Response

CHEMTREC: (800) 424-9300

Product Information

Product Information and MSDS Requests: (800) 821-5693 and www.championbrands.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS	EU	WHMIS Req?	%wt
Petroleum Distillates	8052-41-3	R10, Xn; R65, Xi; R37	Yes	93 – 100
Methylcyclopentadienyl-Manganese Tricarbonyl	12108-13-3	T+; R26, T; R24/25 N; R50	Yes	<1
1,3,5-trimethyl-Benzene	108-68-8	R10, Xi; R37	Yes	<1
1,2,4-trimethyl-Benzene	95-63-6	R10, Xn; R20, Xi; R36/37/38, N; R51/53	Yes	<1
Xylene	1330-20-7	R10, Xn; R20/21, Xi; R38	Yes	<1

3. HAZARD IDENTIFICATION

CONTAINS INGREDIENTS CONSIDERED HAZARDOUS. SEE SECTIONS 8 AND 11 FOR MORE INFORMATION.

KEEP OUT OF REACH OF CHILDREN!

Primary Hazards and Critical Effects: WARNING! CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. COMBUSTIBLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

Physical/Chemical Hazards: Combustible.

Environmental Hazards: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Hazardous Material Information System (U.S.A.): Health: 2 Flammability: 2 Reactivity: 0

4. FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Classified by OSHA as combustible.

NFPA RATINGS: Health: 2 Flammability: 2 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: >40.5°C (>105.0 °F)

Autoignition Temperature: 279.4°C (>535.0 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 1.0% NA Upper: 6.0%

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: Wear NIOSH Approved SCBA and full protective equipment. Water may be ineffective in fighting a petroleum fire unless used by experienced fire fighter.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

6. ACCIDENTAL RELEASE INFORMATION

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

7. HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, 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 containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

8. EXPOSURE CONTROL/PERSONAL PROTECTIVE EQUIPMENT

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material, applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Silver Shield, Viton.

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Ingredient Name & CAS#	OEL U.S.A	OEL Canada	OEL Europe	OEL Australia
Petroleum Distillates CAS 8052-41-3	ACGIH TLV (United States). Skin TWA: 200 mg/m ³ 8 hour(s).	Not available.	ACGIH TLV (United States). Skin TWA: 200 mg/m ³ 8 hour(s).	ACGIH TLV (United States). Skin TWA: 200 mg/m ³ 8 hour(s).
1,2,4 Trimethylbenzene CAS 95-63-6	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
1,3,5-Trimethylbenzene CAS 108-67-8	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
Xylene CAS 1330-20-7	ACGIH (United States, 1996). TWA: 100 ppm STEL: 150 ppm	TWA: 100 STEL: 150	EH40 (UK) (Europe, 2002). Skin TWA: 50 ppm 8 hour(s). STEL: 100 ppm 15 min.	NOHSC (Australia, 2003). TWA: 80 ppm 15 minute. STEL: 150 ppm 15 minute.
Methylcyclopentadienyl Manganese Tricarbonyl CAS 12108-13-3	ACGIH (United States, 1994). Skin TWA: 0.2 mg/m ³ 8 hour(s).	TWA: 0.2 mg/m ³ 8 hour(s).	EH40 (UK) (Europe, 2002). Skin TWA: 0.2 mg/m ³ 8 hour(s). STEL: 0.6 mg/m ³ 15 min.	NOHSC (Australia, 2003). Skin TWA: 0.2 mg/m ³ 8 hour(s).

9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Vapor Pressure	2.000 mmHg @ 60°F
pH	Not determined
API Gravity	43.4 @ 60°F
Boiling Point	315°F – 398°F @ 760mmHg
Evaporation Rate	<1 .00 (Butyl Acetate)
VOC	100%, 787.0 g/l, 6.560 lbs/gal
Appearance	Clear
State	Liquid
Color	Amber
Odor	Petroleum Naptha
Solubility	Not Soluble in Water

10. STABILITY AND REACTIVITY

Chemical Stability: 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.

Incompatibility With Other Materials: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides.

Hazardous Polymerization: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry : Skin, Eyes, Inhalation and Ingestion.

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

Acute Effects:

Skin Contact: May cause irritation, drying of skin.

Inhalation: Irritating to respiratory system.

Ingestion: Toxic if swallowed. Aspiration hazard if swallowed- can enter lungs and cause damage.

Eye Contact: Irritating to eyes.

Chronic Effects:

Adverse Effects: petroleum distillates: Adverse symptoms may include: In the presence of slight maternal toxicity, fetotoxic effects have been observed in the offspring of rats exposed by inhalation to Solvent Naphtha (petroleum) light aromatic. Trimethylbenzenes: Adverse symptoms may include: This product contains trimethylbenzene. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals. Xylene: Adverse symptoms may include: Central nervous system, liver, kidneys, and blood effects by inhalation and heart beat irregularity (arrythmia) and heart beat - increase. High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known. Trimethylbenzenes: Adverse symptoms may include: This product contains trimethylbenzene. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals. Methyl cyclopentadienyl manganese tricarbonyl: Adverse symptoms may include: This product contains MMT. A 90 day chronic inhalation study of MMT indicated that 3 mg/m³ of MMT showed detectable effects in mice. The lungs appear to be the organ most sensitive to MMT both acutely and chronically.

Carcinogenic Effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Toxicity Data

Ingredient Name	Test	Result	Route	Species
Methylcyclopentadienyl Manganese Tricarbonyl	LD50	175 mg/kg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit
	LC50	>2000 ppm (1 hr)	Inhalation	Rat

Additional Toxic Information: None Available

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Methylcyclopentadienyl Manganese Tricarbonyl (MMT) is toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Based on calculation.

ENVIRONMENTAL FATE

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.

Germany water class : Not determined.

13. DISPOSAL INFORMATION

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

14. TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations. The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

U.S. Department of Transportation Non-Bulk NONE – Excepted from Hazmat Regulations
Shipping Name:

Maritime transport IMDG:

IMO/IMDG Shipping Description: Petroleum Distillates, n.o.s.

IMO/IMDG Technical Name: Contains: Petroleum Distillates

IMO/IMDG Hazard Class: 3

IMO/IMDG Identification Number: UN1268

IMO/IMDG Packing Group: None

IMO/IMDG Markings: "LTD QTY" on transport container/trailer

IMO/IMDG Label: Flammable Liquid

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Shipping Description: Petroleum Distillates, n.o.s.

ICAO/IATA Identification Number: ID 8000

ICAO/IATA Hazard Class: 9

ICAO/IATA Packing Group: None

ICAO/IATA Label: 9

15. REGULATORY INFORMATION

EU Regulations

Hazard: Irritant, Dangerous for the environment

Risk Phrases:

R10- Flammable.

R37- Irritating to respiratory system.

R41- Risk of serious damage to eyes.

R66- Repeated exposure may cause skin dryness or cracking.

R67- Vapors may cause drowsiness and dizziness.

R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S16- Keep away from sources of ignition - No smoking.

S23- Do not breathe vapor.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

S57- Use appropriate containment to avoid environmental contamination.

Contains : Methyl cyclopentadienyl manganese tricarbonyl

US Regulations

SARA 313 toxic chemical notification and release reporting: trimethylbenzenes < 1.0%; Xylene

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

State

California prop. 65: Not applicable.

Canadian Regulations

WHMIS (Classification) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2B: Material causing other toxic effects (TOXIC).

Chemical Inventory Status:

United States: All components on TSCA Inventory

Canada: All components on DSL

Europe : All components on EINECS

Japan : All components on METI

Australia : All components on NICNAS

Korea : All components on ECL

16. DISCLAIMER

REVISION STATEMENT: Revision updates many sections and the MSDS should be read in its entirety.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value

TWA - Time Weighted Average

STEL - Short-term Exposure Limit

PEL - Permissible Exposure Limit

CHA - Champion LLC

CAS - Chemical Abstract Service Number

NDA - No Data Available

NA - Not Applicable

<= - Less Than or Equal To

>= - Greater Than or Equal To

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by Champion LLC, 1001 Golden Drive, Clinton, Missouri 64735.

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