



# SAFETY DATA SHEET

## WARCO OCTANE BOOSTER

V#060115

### SECTION 1: Product and Company Identification

SDS ID: 450

PRODUCT NAME: WARCO Octane Booster

PRODUCT NUMBER: 12/12 oz – 424 (WAA-0301)

FORMULA NUMBER: PPB-0241

MANUFACTURER: WARCO Products, Inc.  
12505 SW HERMAN RD.  
Tualatin, OR. 97062

Emergency Telephone Number(s) (814)726-1780 (in the US)

TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only): CHEMTREC 1-800-424-9300 (in the US)

SDS DATE OF PREPARATION/REVISION: 6/1/15

PRODUCT USE: Automobile Fuel Additive – consumer use

RESTRICTIONS ON USE: None identified

### SECTION 2: Hazards identification

#### GHS/HAZCOM 2012 Classification:

##### Health

Acute Toxicity - Inhalation Category 3

Aspiration Toxicity Category 1

Carcinogen Category 2

Skin Irritant Category 2

##### Physical

Flammable Liquid Category 3

#### Label Elements



#### DANGER!

H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation

H331 Toxic if inhaled

H351 Suspected of causing cancer



**Prevention:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground or bond container and receiving equipment
- P241 Use explosion-proof electrical, ventilating, and lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing vapors.
- P264 Wash exposed skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves, protective clothing, and eye protection.

**Response:**

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P331 Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P332 + P313 If skin irritation occurs: Get medical attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P311 Call a POISON CENTER, or doctor.
- P308 + P313 IF exposed or concerned: Get medical advice.
- P370 + P378 In case of fire: Use water fog, foam, carbon dioxide or dry chemical to extinguish.

**Storage:**

- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

**Disposal:**

- P501 Dispose of contents and container in accordance with local and national regulations.

**SECTION 3: Composition/Information on Ingredients**

Component	CAS No.	Amount
Refined Petroleum Distillates	8052-41-3, 8008-20-6 64742-95-6	60-100%
Nonane	111-84-2	0-10%
1,2,4-Trimethylbenzene	95-63-6	1-10%
Methylcyclopentadienyl Manganese Tricarbonyl (MMT)	12108-13-3	< 2%
Naphthalene	91-20-3	<0.6%

The exact concentrations are a trade secret.

## SECTION 4: First aid measures

INHALATION: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

SKIN CONTACT: Remove contaminated clothing immediately. Wash all affected and exposed areas with soap and water. If skin irritation or symptoms of exposure develop, seek medical attention.

EYE CONTACT: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing persist, seek medical attention.

INGESTION: Do NOT induce vomiting. Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for ingestion, and excessive inhalation exposures.

NOTES TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and clinical conditions. A serious potential effect is aspiration pneumonitis, which may lead to non-cardiogenic pulmonary edema. The patient should be observed for signs of lung injury if aspiration is suspected.

## SECTION 5: Fire-fighting measures

Suitable Extinguishing Media: Use carbon dioxide, foam or dry chemical to extinguish the fire. Water is not an effective extinguishing agent but may be used to cool fire exposed containers..

Specific Hazards Arising from Chemical: Flammable liquid. Product may form combustible mixtures at temperatures at or below the flashpoint. Runoff to sewer may cause fire or explosion hazard. Vapors are heavier than air and may travel along the ground or be moved by ventilation and be ignited by heat, flame or spark at locations distant from the material handling point. Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides, manganese oxide and reactive hydrocarbons.

Special Fire Fighting Procedures: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

## SECTION 6: Accidental release measures

Personal Precautions, Protective Equipment And Emergency Procedures: Eliminate all ignition sources. Ventilate area. Wear appropriate protective clothing and equipment (See Section 8).

Methods And Materials For Containment/Cleanup: Collect material using non-combustible absorbents and disposal in a container suitable for flammable waste.



## SECTION 7: Handling and storage

Precautions For Safe Handling Harmful or Fatal if Swallowed. Contains petroleum distillates. Avoid eye contact. Avoid contact with skin and clothing.

Avoid breathing vapors. Use with adequate ventilation. Wash exposed skin thoroughly with soap and water after use. Keep container away from heat, sparks, flames and other sources of ignition. Keep containers closed when not in use. Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

Conditions For Safe Storage, Including Any Incompatibilities: Keep container away from heat, sparks, flames and other sources of ignition. Store in a cool, dry area away from heat, oxidizers and all sources of ignition.

**NFPA CLASSIFICATION: II**

## SECTION 8: Exposure controls/personal protection

### Exposure Guidelines

CHEMICAL	EXPOSURE LIMIT
Refined Petroleum Distillates	100 ppm TWA ACGIH TLV 500 ppm TWA OSHA PEL
Nonane	200 ppm TWA ACGIH TLV
1,2,4-Trimethylbenzene	25 ppm TWA ACGIH TLV
Methylcyclopentadienyl manganese tricarbonyl (MMT) as MN	0.2 mg/m <sup>3</sup> TWA ACGIH TLV (Skin) 5 mg/m <sup>3</sup> Ceiling OSHA PEL
Naphthalene	10 ppm TWA OSHA PEL 10 ppm TWA ACGIH TLV skin 15 ppm ACGIH STEL

Appropriate Engineering Controls: General ventilation should be adequate for all normal use. For operations where the TLV may be exceeded, forced ventilation such as local exhaust may be needed to maintain exposures below applicable limits.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: None under normal use conditions. For operations where the TLV may be exceeded, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Gloves: Impervious gloves such as rubber, nitrile or neoprene recommended for operations which may result in prolonged or repeated skin contact.

Eye Protection: Splash-proof goggles recommended.

Other Protective Equipment/Clothing: Appropriate protective clothing as needed to minimize skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be immediately removed and laundered before



re-use.

## SECTION 9: Physical and chemical properties

APPEARANCE:	Clear, light amber liquid. Darkens with exposure to sunlight.
ODOR:	Hydrocarbon
ODOR THRESHOLD:	Not determined.
PH:	Not determined
MELTING/FREEZING POINT:	Not determined
BOILING POINT/RANGE:	330-364°F (165.5-184.4°C)
FLASH POINT:	110-122°F (43-50°C) Setflash
EVAPORATION RATE (Butyl Acetate = 1)	<1
FLAMMABILITY (SOLID,GAS)	Flammable Liquid
FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	Not determined
VAPOR DENSITY: (Air=1)	>1
RELATIVE DENSITY:	0.77-0.78
SOLUBILITIES	Water: Insoluble
PARTITION COEFFICIENT (n-octanol/water)	Not determined
AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined
VISCOSITY:	Cst at 100°C: <1

## SECTION 10: Stability and reactivity

Reactivity: Normally unreactive

Chemical Stability: Stable.

Possibility Of Hazardous Reactions: Reaction with strong oxidizers will generate heat.

Conditions To Avoid: Keep away from heat, sparks and open flames. Exposure to ultraviolet light causes the product to darken.

Incompatible Materials: Strong oxidizing agents and reducing agents.

Hazardous Decomposition Products: Combustion will produce carbon monoxide, carbon dioxide, nitrogen oxides, manganese oxides and reactive hydrocarbons.

## SECTION 11: Toxicological information

### POTENTIAL HEALTH EFFECTS

INHALATION: Excessive inhalation of vapor or mist may cause irritation of the nose, throat and respiratory tract. May cause harmful central nervous system effects including, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death.

SKIN CONTACT: May cause irritation, seen as localized reddening and swelling. Prolonged or repeated exposure to this material



may cause redness, burning, drying and cracking of the skin. Methylcyclopentadienyl manganese tricarbonyl (MMT) is rapidly absorbed through the skin to cause nervous system effects.

EYE CONTACT: May cause eye irritation with discomfort, tearing and blurred vision.

INGESTION: Swallowing may cause gastrointestinal disturbances including irritation, abdominal pain, belching, nausea, vomiting, frequent loose stools and diarrhea. Ingestion of large quantities may cause harmful central nervous system effects similar those listed under "Inhalation". This material is an aspiration hazard; product can enter the lungs during swallowing or vomiting and cause lung inflammation and damage.

CHRONIC EFFECTS: Chronic exposure to manganese compounds may result in kidney, liver, lung and nervous system damage. Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone marrow effects and with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the product may be harmful or fatal.

CARCINOGENICITY LISTING: Naphthalene is listed as possibly carcinogenic to humans (Group 2B) by IARC and reasonably anticipated to be a carcinogen by NTP. None of the other components greater than 0.1% are listed as a carcinogen by IARC, NTP, ACGIH, or OSHA.

**ACUTE TOXICITY VALUES:**

Calculated ATE for product:

ATE Oral: >2000 mg/kg  
ATE Dermal: >2000 mg/kg  
ATE Inhalation: 6.72 mg/L/4 hr.

Refined Petroleum Distillates:

LD50 Oral Rat: >5000 mg/kg  
LD50 Skin Rabbit: >3,000 mg/kg  
LC50 Inhalation rat: >5,500 mg/m<sup>3</sup>/4hr.

Nonane:

LC50 Inhalation Rat: 32,000 ppm/4 hr.

1,2,4-Trimethylbenzene:

LD50 Oral Rat: 5,000 mg/kg  
LC50 Inhalation Rat: 18,000 mg/m<sup>3</sup>/4 hr.

Naphthalene:

LD50 Oral Rat: 490 mg/kg  
LD50 Skin Rabbit: >20,000 mg/kg  
LC50 Inhalation Rat: >340 mg/m<sup>3</sup>/1 hr.

Methylcyclopentadienyl Manganese tricarbonyl:

LD50 Oral Rat: 51.8 mg/kg  
LC50 Inhalation Rat: 0.076 mg/L/4 hours  
LD50 Skin Rabbit: 140 mg/kg

**SECTION 12: Ecological information**

**ECOTOXICITY**

1,2,4-Trimethylbenzene:

LC50 Fathead Minnow 7.72 mg/L/96 hr.  
EC50 Daphnia Magna 6.14 mg/L/48 hr.

Naphthalene:

LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96



Methylcyclopentadienyl Manganese tricarbonyl: LC50: Cyprinus carpio 0.21 mg/L/96 hr.  
EC50 Daphnia: 0.83 mg/L/48 hr.

PERSISTENCE AND DEGRADABILITY: 1,2,4-Trimethylbenzene: Reached 4-18% of its theoretical BOD in 4 weeks.  
Naphthalene: Reached 2% of its theoretical BOD in 4 weeks.  
Methylcyclopentadienyl Manganese tricarbonyl: Less than 25% degradation occurred within 14 days.

**BIOACCUMULATIVE POTENTIAL:**

Nonane: The potential for bio concentration in aquatic organisms is very high. BCF 12000.

1,2,4-Trimethylbenzene: Bio concentration in aquatic organisms is moderate to high.

Naphthalene: BCF 23 to 146, these BCF values suggest the potential for bio concentration in aquatic organisms is low to high.

Methylcyclopentadienyl Manganese tricarbonyl: The bioaccumulation factor of organic manganese (derived from MMT) in fish is in the order of 200 already after 24 hours. The bioaccumulation in the plants was higher than in the fish, reaching a BCF value of 400, after 24 hours.

**MOBILITY IN SOIL:**

Nonane: Is expected to be immobile in soil. Kow 5.65.

1,2,4-Trimethylbenzene: Will have low mobility in soil.

Naphthalene: Is expected to have moderate to low mobility in soil

**OTHER ADVERSE EFFECTS:**

May be harmful to the aquatic environment with long lasting effects.

**SECTION 13: Disposal considerations**

Dispose of product as hazardous waste (ignitable) in accordance with all local, state/provincial and federal regulations.

**SECTION 14: Transport information**

Transport Status: This product is a consumer product and inner packagings 5 L/1.3 gal capacity or smaller and a gross mass for the package not exceeding 30 kg/66 lbs meet the criteria for shipment as a limited quantity and consumer commodity for both ground and vessel shipment. Because the flashpoint exceeds 37.8°C (100°F) and the product does not meet the definition of any other hazard class and is not a hazardous substance, hazardous waste or marine pollutant, the combustible liquid (flammable liquid for Canada) exception has been taken for US and Canadian ground transportation. This product can be shipped by road and rail as a non-regulated shipment in non-bulk packaging (450 L/119 gal or less) using these exceptions. This exception does not apply to international vessel shipments under the IMDG Code so this product is regulated for shipment by that mode. The IMDG limited quantity provisions apply to shipments with inner packagings 5 L or smaller and gross mass for the package not exceeding 30 kg. Additionally consumer products are exempted from marking of the UN number on the packaging (see IMDG Code 3.4.5.1).



U.S. DOT HAZARD CLASSIFICATION (For Ground Shipments Only)

PROPER SHIPPING NAME: Excepted from HazMat Regulations (49CFR 173.150f)  
TECHNICAL NAME: None  
UN NUMBER: None  
HAZARD CLASS/PACKING GROUP: Not Applicable  
LABELS REQUIRED: None

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION

Shipments with inner packagings 5 L or smaller and gross mass for the package not exceeding 30 kg can be shipped as a Limited Quantity (see above)

DESCRIPTION: UN1993, FLAMMABLE LIQUID, N.O.S.  
(Petroleum Distillates, 1,2,4-Trimethylbenzene), 3, PG III, FP 43 C, LTD QTY  
ID NUMBER: UN1993  
HAZARD CLASS: 3  
PACKING GROUP: III  
LABELS REQUIRED: LIMITED QUANTITY  
PLACARDS REQUIRED: LIMITED QUANTITY MARK

CANADIAN TDG CLASSIFICATION (For Ground Shipments Only)

PROPER SHIPPING NAME: Excepted from Regulation (Section 1.33)  
TECHNICAL NAME: None  
UN NUMBER: None  
HAZARD CLASS/PACKING GROUP: Not Applicable  
LABELS REQUIRED: None

IATA/ICAO SHIPPING CLASSIFICATION: These products are not suitable for shipment by air.

**SECTION 15: Regulatory information**

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute Health, Chronic Health, Fire Hazard

EPA SARA 313 This Product Contains the Following Chemicals Subject to Annual Release Reporting requirements Under SARA Title III, Section 313 (40 CFR 372):

Pseudocumene	95-63-6	1-10%
(1,2,4-Trimethylbenzene) Naphthalene	91-20-3	<0.6%

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

Cercla Section 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Methylcyclopentadienyl manganese tricarbonyl (MMT) (2% maximum) of 100 lbs., is 5,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.



California Proposition 65: This product contains less than 0.6% naphthalene and less than 0.004% ethylbenzene which are known to the State of California cause cancer.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 1 - Subdivision A - (Very toxic material causing immediate and serious toxic effects); Class D - Division 2 - Subdivision A - (Very toxic material causing other toxic effects) carcinogen; Class B - Division 3 (Combustible Liquid).

CANADIAN WHMIS HAZARD SYMBOLS:



EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on the EINECS inventory.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

KOREA: All of the ingredients of this product are listed on the Korean Existing Chemicals List (KECL).

PHILIPPINES: All of the ingredients of this product are listed on the Philippine Inventory of Chemical and Chemical Substance (PICCS)

CHINA: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

## SECTION 16: Other information

NFPA Rating: Fire: 2 Health: 3 Instability: 0

REVISION SUMMARY: All Sections – conversion to GHS SDS classification and labeling and format.

SDS Date of Preparation/Revision: 6/1/2015

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While WARCO, Products, Inc. believes that the data contained herein are factual, the data are not to be taken as a warranty or representation for which WARCO, Products, Inc assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact  
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