Safety Data Sheet

Section 1 – Identification of the Mixture and of the Company

Product Identification

Primary Identifier(s) Used on the Label
Berryman *Octane Booster Fuel Treatment*
Product Synonym(s)
blend "OB-D"
Product Number(s)
1512

Relevant Identified Uses and Uses Advised Against

Recommended Uses
gasoline fuel additive
Uses Advised Against
not for use in diesel fuels

Manufacturer/Supplier Details

Berryman Products, Inc.
3800 E Randol Mill Rd
Arlington, TX 76011
(800) 433-1704 (USA/Canada)
(817) 640-2376 (international)
www.BerrymanProducts.com

Emergency 24-Hour Telephone Number(s) – InfoTrac, Inc.

(800) 535-5053 (USA/Canada)
(352) 323-3500 (international)

Section 2 – Hazards Identification

Classification of the Substance or Mixture (29 CFR 1910.1200)

Physical Hazards
Flammable Liquid – Category 3
Health Hazards
Eye Irritant – Category 2B
Carcinogen – Category 2
Specific Target Organ Toxicity - Single Exposure – Category 3 (narcotic effects)
Aspiration Hazard – Category 1
Environmental Hazard - Acute – Category 2

Allocation of Label Elements

Chemical Identity
Berryman *Octane Booster Fuel Treatment*
Pictograms

Signal Word
DANGER

Hazard Statements
H226 – Flammable liquid and vapor.
H304 – May be fatal if swallowed and enters airways.
H320 – Causes eye irritation.
H336 – May cause drowsiness or dizziness.
H351 – Suspected of causing cancer.
H401 – Toxic to aquatic life.
Prevention Precautionary Statements
P101 – Keep out of reach of children.
P102 – Read label before use.
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.
P240 – Ground/bond container and receiving equipment. Special precautions may be necessary for non-conductive containers.
P241 – Use explosion-proof electrical, ventilation, and lighting equipment.
P242 – Use only non-sparking tools, such as brass or bronze.
P243 – Take precautionary measures against static discharge.
P264 – Wash thoroughly with soap and water after handling.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment.
P280 – Wear protective gloves, protective clothing, and eye or face protection.
Response Precautionary Statements
P321 – Specific treatment available in this document in "Section 4 – First Aid Measures."
P331 – Do NOT induce vomiting.
P301/P310 – IF SWALLOWED: Immediately call POISON CONTROL CENTER, hospital emergency room, or doctor.
P303/P361/P353/P312 – IF ON SKIN (OR HAIR): Immediately take off all contaminated clothing. Rinse skin with soap and water or shower. Call POISON CONTROL CENTER, hospital emergency room, or doctor if you feel unwell.
P304/P340/P312 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call POISON CONTROL CENTER, hospital emergency room, or doctor if you feel unwell.
P305/P351/P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308/P313 – If exposed or concerned, get medical advice/attention.
P337/P313 – If eye irritation persists, get medical advice/attention.
P370/P378 – In case of fire, use water fog, dry chemical, alcohol-resistant foam, or carbon dioxide to extinguish.
Storage Precautionary Statements
P405 – Store locked-up.
P403/P233 – Store in a well-ventilated place. Keep container tightly closed.
Disposal Precautionary Statements
P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations, as applicable.

Hazards Not Otherwise Classified
none known

Ingredients of unknown acute toxicity
none

Section 3 – Composition/Information on Ingredients

Component	CAS RN	Weight
Petroleum Distillates	64742-88-7	90-95%
Methylcyclopentadienyl Manganese Tricarbonyl	12108-13-3	0.5-1.0%
Ethylbenzene	100-41-4	≤ 0.14%

Section 4 – First Aid Measures

Description of First Aid Measures
Ingestion
Immediately call poison control center, hospital emergency room, or doctor. Do NOT induce vomiting. Drink 1-2 glasses of milk or water.
Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Description of First Aid Measures (cont'd)

Skin Contact

Immediately take off all contaminated clothing. Rinse skin with soap and water or shower.

Inhalation

Remove person to fresh air and keep comfortable. If experiencing respiratory symptoms or if breathing is difficult, administer oxygen and call poison control center, hospital emergency room, or doctor.

Most Important Symptoms and Effects

Acute/Immediate

headache and lightheadedness; narcotic effects, including dizziness, drowsiness, and loss of coordination; nausea and vomiting

Delayed

drying, cracking, or defatting of the skin

Indications of Need for Immediate Medical Attention and Specific Treatment Required

Indications of Need for Immediate Medical Attention

In the event of shortness of breath, difficulty breathing, or spontaneous vomiting, seek immediate medical attention.

Specific Treatment and Notes to Physician

If performing lavage, endotracheal and/or esophageal control is recommended. If spontaneous vomiting occurs, keep head below hips to avoid aspiration.

Section 5 – Firefighting Measures

Fire Extinguishing Media

Support for Combustion

Product supports combustion.

Suitable Extinguishing Media

water fog, dry chemical, fluorine-free foam, or carbon dioxide

Unsuitable Extinguishing Media

water jet/spray (may cause product to float to surface and reignite)

Special Hazards/Considerations

Combustion Products

Combustion in the presence of air may yield hydrocarbons; organic oxygenates; amines; oxides of carbon, nitrogen, and manganese; and organometallic compounds of manganese.

Special Protective Equipment and Precautions for Firefighters

Special Protective Equipment

Firefighters should employ SCBA and full protective gear, including shield, as product may vent, rupture, or explode violently at elevated temperatures.

Precautions and Procedures

Flammable liquid and vapor. Vapors heavier than air. Remove product from area if safe. Use water spray to cool nearby containers.

Additional Information

National Fire Protection Association (NFPA)

flammable liquid classification II

Section 6 – Accidental Release Measures

Personal and Environmental Precautions

Personal Precautions

Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Special precautions may be necessary for non-conductive containers. Use explosion-proof electrical, ventilation, and lighting equipment. Use only non-sparking tools, such as brass or bronze. Avoid breathing mist, vapor, or spray. Wash thoroughly with soap and water after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye or face protection.

Environmental Precautions

Avoid release to the environment.

Materials and Methods for Containment

Small Spills

Use socks/absorbent mini-booms or other inert barrier if necessary to contain small spills.

Large Spills

Utilize large socks/absorbent booms or other inert barrier to form dam/dike in order to contain spill and prevent further loss.

Materials and Methods for Cleanup

Small Spills

Remove source from area if safe to do so. Use granular sorbent, gel sorbent, vermiculite, cat litter, dirt/earth, pads/rolls, or pillows to absorb spilled material. Other useful supplies may include a mop and mop bucket. Remediate affected area as necessary.

Large Spills

Keep upwind from spill. Remove source from area if safe to do so. Use a mop and mop bucket or explosion-proof transfer equipment to recover spilled material. Use granular sorbent, gel sorbent, vermiculite, cat litter, dirt/earth, pads/rolls, or pillows to absorb residual material. Remediate affected area as necessary.

Section 7 – Handling and Storage

Precautions for Safe Handling

Personal Precautions

Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye or face protection. Wash thoroughly with soap and water after handling. Do not eat, drink or smoke when using this product.

Environmental Precautions

Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Special precautions may be necessary for non-conductive containers. Use explosion-proof electrical, ventilation, and lighting equipment. Use only non-sparking tools, such as brass or bronze. Avoid release to the environment.

Conditions and Considerations for Safe Storage

Flammable liquid and vapor. Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children. Store locked-up and in accordance with NFPA flammable liquid classification II recommendations.

Section 8 – Exposure Controls/Personal Protection

Component	CAS RN	OSHA PEL	ACGIH TLV
Petroleum Distillates (as Stoddard Solvent)	64742-88-7	500 ppm	500 ppm
Methylcyclopentadienyl Manganese Tricarbonyl	12108-13-3	0.2 mg/m^3	0.2 mg/m^3
Ethylbenzene	100-41-4	100 ppm	100 ppm

Exposure Controls

Appropriate Engineering Controls

If practical, use outside with adequate ventilation to minimize exposure.

PPE Overview

Hand Protection

Use of chemical-resistant gloves (butyl rubber, EVAL, neoprene, nitrile/Buna-N, PVA, PVC, or Viton) is recommended.

Eye Protection

Use of safety glasses with wrap-around lens or goggles is recommended.

Respiratory Protection

If necessary, use respiratory protection sufficient to reduce exposure to permissible limits.

Additional Protection

For industrial settings, access to a chemical safety shower with eye wash station is strongly recommended.

Section 9 – Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical State

liquid

Appearance

clear, red

Odor

mild, solvent

Odor Threshold

2.3 ppm

pH

not relevant

Freezing Point

< 0°F

Information on Basic Physical and Chemical Properties (cont'd)

Boiling Range
298 - 550°F

Flash Point and Method
105-110°F by closed-cup tester

Explosion Limits in Air
0.8 - 7.1% by volume (composite)

Evaporation Rate
0.1 (n-Butyl Acetate=1.0)

Vapor Pressure, as supplied
0.9 mm of Hg at 68°F

Vapor Density
>1.0

Specific Gravity
0.80 at 68°F

Density
6.7 lb/gal at 68°F

Water Solubility
insoluble

n-Octanol/Water Partition Coefficient (log P_{ow})
4.9 (estimated)

Viscosity
1.6 cSt at 68°F

Volatility
90 - 95% by weight

Auto-ignition temperature
540°F (composite)

Section 10 – Stability and Reactivity

Chemical Stability under Normal Conditions of Use

Chemical Stability
Stable under normal conditions of use.

Conditions Affording Instability
none known

Reactivity
May react with light.

Possibility of Hazardous Reactions
none known

Conditions to Avoid
Keep away from heat, sparks, open flames, and hot surfaces. No smoking. If practical, avoid temperatures exceeding flash point.

Incompatible Materials
strong acids; oxidizers; reducing agents

Hazardous Decomposition Products
none known

Section 11 – Toxicological Information

Likely Routes of Exposure
ingestion, skin contact, eye contact, inhalation

Symptoms Related to Physical, Chemical, and Toxicological Characteristics

Ingestion

Large Quantity
gastrointestinal disturbances, including upset stomach, cramping, nausea, vomiting, and diarrhea

Small Quantity/Incidental Contact
gastrointestinal disturbances, including upset stomach, cramping, nausea, and vomiting

Skin Contact
mild skin irritation

Symptoms Related to Physical, Chemical, and Toxicological Characteristics (cont'd)

Eye Contact
slight eye irritation
Inhalation
headache, lightheadedness; narcotic effects, including dizziness, drowsiness, and loss of coordination; nausea and vomiting

Immediate, Delayed, and Chronic Effects

Short-Term Exposure

Potential Immediate Effects
Ingestion
gastrointestinal disturbances, nausea and vomiting
Skin Contact
drying of the skin
Eye Contact
none known
Inhalation
shortness of breath or difficulty breathing, headache, dizziness, nausea and vomiting, drowsiness, fatigue, death
Potential Delayed Effects
Ingestion
aspiration pneumonitis, cyanosis, death
Skin Contact
defatting of the skin, drying and cracking of the skin, aggravation of pre-existing skin conditions
Eye Contact
none known
Inhalation
fatigue

Long-Term Exposure

Potential Immediate Effects
none known
Potential Delayed Effects
none known
Potential Chronic Health Effects
Carcinogenicity
International Agency for Research on Cancer (IARC) Monographs
Group 2B – Possible Human Carcinogen (Ethylbenzene)
National Toxicology Program (NTP) Report on Carcinogens
not listed
Occupational Safety & Health Administration (OSHA)
not listed
Mutagenicity / Genetic Toxicity
not suspected of being a human mutagen / genetic toxicant
Teratogenicity
not suspected of being a human teratogen
Developmental Effects
not suspected of being a developmental toxicant
Fertility Effects
not suspected of being a reproductive/fertility toxicant
Effects on Lactation
not suspected of affecting lactation

Specific Target Organ Toxicity (STOT)

Single Exposure
central nervous system (narcotic effects)
Repeated Exposure
none known

Numerical Measures of Acute Toxicity

Oral (Rat)
LD_{50}: 4100 mg/kg (derived)
Dermal (Rabbit)
LD_{50}: 2120 mg/kg (derived)
Inhalation (Rat)
LC_{50}: 22 mg/L (derived)

Additional Toxicological Information

Skin Irritation/Corrosion (Rabbit)
slight skin irritant
Serious Eye Damage/Irritation (Rabbit)
slight eye irritant
Respiratory Sensitization
unknown frequency of respiratory sensitization
Skin Sensitization
unknown frequency of skin sensitization
Aspiration Hazard
known aspiration hazard

Section 12 – Ecological Information

General Ecological Assessment/Overview

Acutely toxic to aquatic life. Harmful to aquatic life with long-lasting effects.

Aquatic Toxicity

Vertebrates (Fish)
Acute Toxicity
LC_{50}: 10 mg/L (derived)
Chronic Toxicity
NOEC: not available
Invertebrates (Water Flea)
Acute Toxicity
LC_{50}: 17 mg/L (derived)
Chronic Toxicity
NOEC: not available
Aquatic Plants (Freshwater Algae)
Acute Toxicity
EC_{50}: 4.7 mg/L (derived)
Chronic Toxicity
NOEC: not available

Terrestrial Toxicity

Invertebrate (Earthworm)
LC_{50}: not available

Persistence and Degradability

Persistence
not expected to be persistent
Degradability
non-rapidly degradable

Bioaccumulative Potential

Bioaccumulation Potential Assessment
does not bioaccumulate
Bioaccumulation Factor
180 (Petroleum Distillates)

Mobility in Soils

Mobility in Soils Assessment
not mobile in soils
Soil Organic Carbon/Water Partition Coefficient (log K_{OC})
not available

Results of PBT and vPvB Assessment

not a persistent, bioaccumulative, toxic chemical (PBT)
not very persistent or very bioaccumulative (vPvB)

Other Adverse Effects

none known

Section 13 – Disposal Considerations

General Assessment/Overview

Dispose of waste in accordance with all applicable regulations. Toxic to aquatic life—do not pour into waterways. Flammable liquid and vapor—do not pour down drain.

RCRA Hazardous Waste Code(s) (40 CFR 261.20-33)

Based on the characteristics of this material as-supplied, used or unwanted product may be subject to RCRA regulations and classified as: D001 – ignitable hazardous waste

Section 14 – Transportation Information

Transportation by Ground – US Department of Transportation

Shipping Description

UN1993, Flammable Liquids, n.o.s., (contains Petroleum Distillates and Manganese Carbonyls), 3, PG III

Exemption Eligibility

When shipped by ground, this product may be eligible for a "Limited Quantity" exception per §49 CFR 173.150.

Transportation by Air – ICAO/IATA

Shipping Description

UN1993, Flammable Liquids, n.o.s., (contains Petroleum Distillates and Manganese Carbonyls), 3, PG III

Exemption Eligibility

When shipped by air, this product may be eligible for a "Limited Quantity" exception.

Transportation by Water – IMO/IMDG

Shipping Description

UN1993, Flammable Liquids, n.o.s., (contains Petroleum Distillates and Manganese Carbonyls), 3, PG III

Exemption Eligibility

When shipped by water, this product may be eligible for a "Limited Quantity" exception.

Section 15 – Regulatory Information

Safety, Health, and Environmental Regulations/Legislation

UNITED STATES – SELECT FEDERAL REGULATIONS

Environmental Protection Agency (EPA)

Toxic Substances Control Act (TSCA) (15 USC 2601, et seq.)

All chemicals known to be present in this product are either listed on the TSCA inventory or are not required to be.

SARA Title III (42 USC 9601, et seq.)

Section 302 – Extremely Hazardous Substances (40 CFR 355)

none

Section 304 – Emergency Release Notification (40 CFR 302.4)

none

Section 311/312 – Hazard Categorization (40 CFR 370.40)

acute toxicity, chronic toxicity, fire hazard

Section 313 – Toxic Chemicals (40 CFR 372.65)

none reportable

Clean Air Act (42 USC ch. 85 § 7401, et seq.)

Section 112 – Hazardous Air Pollutants

Methylcyclopentadienyl Manganese Tricarbonyl, Ethylbenzene

Regulation of Fuels and Fuel Additives

This product complies with the requirements of §40 CFR 80 and must be used in a manner consistent with the directions on the product label.

Occupational Safety & Health Administration (OSHA)

Hazard Communication Standard

This safety data sheet (SDS) is provided for compliance with applicable regulations of the Hazard Communication Standard of 2012 (HCS/HAZCOM 2012) found in §29 CFR 1910.1200. Federal law requires persons receiving this document to study it carefully, become aware of the hazards of this product, and notify all employees, visitors, agents, and contractors of the information contained herein.

Consumer Product Safety Commission

Federal Hazardous Substances Act

This product is regulated under the Federal Hazardous Substances Act, is subject to the labeling requirements of 16 CFR 1500, and must include at minimum the following cautionary statements: DANGER: Combustible. Harmful or fatal if swallowed. Eye and skin irritant. Keep out of the reach of children.

UNITED STATES – SELECT REGIONAL CONSIDERATIONS

Ozone Transport Commission (OTC) – Model Rule VOC Limit and Category
not regulated as a fuel additive
Lake Michigan Air Directors Consortium (LADCO) – Model Rule VOC Limit and Category
not regulated as a fuel additive

UNITED STATES – SELECT STATE REGULATIONS

California
Office of Environmental Health Hazard Assessment (OEHHA)
Proposition 65 – Safe Drinking Water and Toxic Enforcement Act of 1986
This product is subject to the labeling requirements of Proposition 65 – Safe Drinking Water and Toxic Enforcement Act of 1986 and must bear the cautionary statement: WARNING! This product contains a chemical known to the State of California to cause cancer.
Air Resources Board (ARB/CARB)
Regulation for Reducing Emissions from Consumer Products – VOC Limit and Category
not regulated as a fuel additive
Massachusetts
"Right-to-Know" Legislation – Substance List (105 CMR 670.000)
Methylcyclopentadienyl Manganese Tricarbonyl, Ethylbenzene
New Jersey
"Right-to-Know" Legislation – Hazardous Substance List (34:5A-1 et seq.)
Methylcyclopentadienyl Manganese Tricarbonyl, Ethylbenzene
Pennsylvania
"Right-to-Know" Legislation – Hazardous Substance List (Chapter 323)
Methylcyclopentadienyl Manganese Tricarbonyl, Ethylbenzene

INTERNATIONAL – SELECT REGULATIONS

Canada
Environment Canada – Domestic Substances List (DSL)
All chemicals known to be present in this product are listed on the DSL.
China
Ministry of Environmental Protection – Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)
All chemicals known to be present in this product are listed on the IECSC.
European Union
European Chemical Agency – European Inventory of Existing Chemical Substances (EINECS)
All chemicals known to be present in this product are listed on the EINECS.

Chemical Safety Assessment
has not been conducted on product, as-supplied

Section 16 – Other Information

Hazardous Materials Information System (HMIS)

Health	*	1
Flammability		2
Reactivity		0
Protective Equipment		B

Hazard Index
Least - 0
Slight - 1
Moderate - 2
High - 3
Extreme - 4

Index of Abbreviations
ACGIH – American Council of Governmental and Industrial Hygienists
CAS RN – Chemical Abstracts Service Registry Number
EC_{50} – Median Effective Concentration
IATA – International Air Transport Association
ICAO – International Civil Aviation Organization
IMDG – International Maritime Dangerous Goods
IMO – International Maritime Organization
LC_{50} – Median Lethal Concentration
LD_{50} – Median Lethal Dose
N/A – Not Applicable
NE – Not Established
NOEC – No Observable Exposure Concentration
PEL – Permissible Exposure Limit (as required by OSHA)
TLV – Threshold Limit Value (as recommended by ACGIH)
VOC – Volatile Organic Compound

Relevant Dates and Applicability

Date of Issuance
September 9, 2025
Date of Previous Revision
May 30, 2015
Primary Revision Change(s)
general update
Document Applicability
This safety data sheet only applies to part number 1512 manufactured on or after January 1, 2025.

Document Author

Dan Nowlan

Legal Disclaimer

The information contained in this document is, to the best of Berryman Products, Inc.'s knowledge, complete and accurate but is not warranted. All materials may present unknown hazards and should be used with caution. It is the responsibility of the user to evaluate the information in a prudent manner and to use it in a manner consistent with its intended purpose. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.