

SAFETY DATA SHEET

SECTION 1 PRODUCT and COMPANY INFORMATION

TRADE NAME: **Castle® 5 Star Diesel™**
PRODUCT TYPE: Diesel Treatment
PRODUCT CODE: C1691-32

MANUFACTURED FOR: Castle Products, Inc.
424 St. Paul Street
Rochester, NY 14605
(800) 876-0222
EMERGENCY (585) 275-3232

SECTION 2 HAZARDS IDENTIFICATION

GHS CLASSIFICATION: DANGER:



Flammable liquids Category 3
Aspiration hazard Category 1
Eye irritation Category 2B
Skin irritation Category 2
Specific target organ toxicity-single exposure (narcotic effects) Category 3
Specific target organ toxicity-single exposure (respiratory tract irritation) Category 3
Carcinogenicity Category 2
Aquatic toxicity (acute) Category 3
Aquatic toxicity (chronic) Category 3
Static Accumulating Liquid

Hazard Statements

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315/H320 Causes skin and eye irritation.
H351 Suspected of causing cancer
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H402/H412 Harmful to aquatic life, with long lasting effects.

Precautionary Statements

P102 Keep out of reach of children.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P235 Keep cool.
P240 Ground/Bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release into the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P301/P310 IF SWALLOWED: Immediately call a POISON CENTER/physician.
P331/P330 Rinse mouth. Do NOT induce vomiting.
P308/P313 IF exposed or concerned: Get medical advice/attention.
P370/P378 In case of fire: Use dry chemicals, CO₂, or water fog/foam to extinguish.
P403/P233/P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	%
Stoddard solvent	8052-41-3	70 – 85%
2-Butoxyethanol	111-76-2	5 – 12%
Trimethyl benzene (mixed isomers)	25551-13-7	1 – 8%
Solvent naphtha (petroleum), light aromatic	64742-95-6	3 – 7%
Nonane	111-84-2	0.5 – 6.5%
2-Ethyhexyl nitrate	27247-96-7	3.0 – 5.5%
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	0.45 – 0.75%
Xylene	1330-20-7	0.25 – 0.55%
Cumene	98-82-8	0.1 – 0.4%

SECTION 4 FIRST AID MEASURES

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician if irritation persists.

If on skin: Take off contaminated clothing and wash it before reuse. Wash with plenty of water. Call a physician if irritation persists.

If swallowed: Immediately call a POISON CENTER/physician. Do not induce vomiting. Rinse mouth. Call a physician if you feel unwell.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a physician if you feel unwell.

Note to Physicians: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Do NOT use water jet.

SPECIFIC/UNUSUAL HAZARDS: Highly flammable. Reacts violently with strong oxidants. Easily ignited by heat, sparks, or flame.

Vapors may cause flashback to ignition source. Irritating gasses may be produced which will require SCBA or a fresh air source.

SPECIAL FIRE FIGHTING EQUIPMENT and PRECAUTIONS for FIREFIGHTERS: As in any fire, wear pressure-demand self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions: Isolate area. Keep unnecessary personnel away. Stay upwind. Keep out of low areas. Ventilate spaces before entering. Evacuate surrounding areas. Do not touch or move through spilled material. Turn off all sources of ignition. No smoking or other sources of flames. Do not use flares. Avoid breathing vapor or mist: ensure adequate ventilation. Avoid contact with skin and eyes.

Environmental precautions: Contains marine pollutants with acute and chronic effects on aquatic organisms. Prevent product from entering drains, waterways, sewers, basements, or confined areas.

Methods for containment: Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up: Eliminate ignition sources including sources of electrical, static or frictional sparks. Wear appropriate protective equipment and clothing during clean-up.

Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for disposal.

Large Spills: A large spill is not likely to occur.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid breathing mist or vapors. Avoid contact with skin and eyes. Wear suitable protective clothing. Wash hands after handling. Use only in well-ventilated area. Keep away from sources of ignition: no smoking. Take measures to prevent the buildup of electrostatic charge.

Storage: Keep containers tightly closed. Store in a cool, dry place, away from sparks, flame or oxidizers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: NE

Appropriate Engineering Controls: Maintain adequate local exhaust ventilation.

Individual Protective Measures - Personal Protective Equipment:

Gloves: Not normally required.

Eye/Face Protection: Eye protection not normally required but recommended. Avoid contact with eyes. If splashes are likely to occur, wear Goggles.

Skin Protection: Wear clothing suited to the task being performed. Avoid prolonged or repeated skin contact.

Respiratory Protection: Not normally required if good ventilation is maintained.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE: Clear Liquid, light yellow to amber.

ODOR: Solvent

ODOR THRESHOLD: ND

MELTING/FREEZING POINT: ND

BOILING POINT: 310°F (154°C)

BOILING RANGE: 310-393°F (154-201°C)

FLASH POINT: 105°F (41°C)

LOWER EXPLOSIVE LIMIT: 1.0% (Stoddard Solvent)

UPPER EXPLOSIVE LIMIT: 7.5% (Stoddard Solvent)

FLAMMABILITY (solid, gas): NA

AUTOIGNITION TEMPERATURE: 464°F (240°C)

EVAPORATION RATE (Butyl Acetate=1): 0.2

VAPOR PRESSURE: ND

VAPOR DENSITY (air=1): 4.85

RELATIVE DENSITY: (H₂O=1): 0.78

SOLUBILITY IN WATER: Insoluble

PARTITION COEFFICIENT (n-octanol/water): ND

pH: NA

DECOMPOSITION TEMPERATURE: ND

VISCOSITY: 0-15 cPs @73°F

PERCENT VOLATILE BY VOL: 805 gm/L

SECTION 10 STABILITY and REACTIVITY DATA

CHEMICAL STABILITY: Stable under normal conditions.

POSSIBILITY of HAZARDOUS REACTIONS: Hazardous reactions are unlikely.

CONDITIONS TO AVOID: Heat, static electricity, sparks and other sources of ignition.

INCOMPATIBLE MATERIALS: Strong acids or oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen, Hydrocarbon fumes and smoke.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

HEALTH EFFECTS: Inhalation hazard is minimal unless product is aerosolized or heated. If material is misted or heating generates vapors, then irritation of mucous membranes and upper respiratory tract may occur.

Vapor/aerosol concentrations above recommended exposure levels may additionally be irritating to the eyes, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects including death.

LD50/LC50 Analysis

Stoddard Solvent: Inhalation LC50 Rat >5 mg/L (4hr mist), Oral LD50 Rat >5,000 mg/kg, Dermal LD50 Rabbit >2,000 mg/kg,

1,2,4-Trimethylbenzene: (Based on data for a similar substance) Inhalation LC50 Rat 10,200 mg/m³ (4hr vapor),

Oral LD50 Rat 6,000 mg/kg, Dermal LD50 Rat >3,440 mg/kg

1,3,5-Trimethylbenzene: (Based on data for similar substance) Inhalation LC50 Rat >10.2 mg/L (4hr vapor),

Oral LD50 Rat >5,000 mg/kg, Dermal LD50 Rat >3,440 mg/kg

1,2,3-Trimethylbenzene: Inhalation LC50 Rat 24 mg/L, Oral LD50 Rat 5,000 mg/kg

2-Ethylhexyl nitrate: Dermal LD50 Rabbit >5,000 mg/kg, Oral LD50 Rat >10,000 mg/kg

2-Butoxyethanol: Inhalation LC50 Rat (male) 2.56 mg/L (4hr mist), Oral LD50 Rat 1,300 mg/kg,

Dermal LD50 Guinea pig >2,000 mg/kg

Solvent naphtha (petroleum), light aromatic: (Based on data for similar substance) Inhalation LC50 Rat >5.6 mg/L (4hr mist),

Oral LD50 Rat >5,000 mg/L, Dermal LD50 Rabbit >2,000 mg/L

Solvent naphtha (petroleum), heavy aromatic: (Based on data for similar substance) Inhalation LC50 Rat >4,778 mg/L (4hr mist),

Oral LD50 Rat 6,318 mg/kg, Dermal LD50 Rabbit >2,000 mg/kg

Xylene: Inhalation LC50 Rat 29 mg/L (4hr vapor), Oral LD50 Rat (male) 3,523 mg/kg, Dermal LD50 Rabbit 12,126 mg/kg (Based on data for similar substance)

Cumene: Oral LD50 Rat 2,260 mg/kg, Dermal LD50 Rabbit >10,000 mg/kg

Carcinogenicity:

Cumene (CAS# 98-82-8) is present at concentrations potentially greater than 0.1%. IARC considers Cumene to be a Group 2B substance, possibly carcinogenic to humans. NTP lists Cumene as Reasonably anticipated to be a human carcinogen.

This determination has been made based on positive findings in animal studies, with findings of increased rates of tumor development following prolonged exposure.

Cumene, 451 Carcinogenicity Studies, Rat. 105 weeks, 6hrs/day. Positive-Inhalation-TC.

2-Butoxyethanol (CAS# 111-76-2) has been determined by the ACGIH to be a Confirmed animal carcinogen with unknown relevance to humans. IARC, NTP, and OSHA all do not consider 2-Butoxyethanol to be a known or anticipated human carcinogen.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY: No Data Available.

PERSISTENCE and DEGRADABILITY: ND

BIOACCUMULATIVE POTENTIAL: Solvent naphtha (petroleum), light aromatic and Solvent naphtha (petroleum), heavy aromatic have high bioaccumulative potential. Based on calculations, 2-Ethylhexyl nitrate may cause long-term effects in the aquatic environment.

MOBILITY in SOIL: ND

OTHER ADVERSE EFFECTS: Acute and chronic aquatic toxicity hazard. Contains up to 8.0% of Trimethylbenzenes, mixed isomers (Category 2 Acute hazard, Category 2 Chronic hazard) and up to 5.5% of 2-Ethylhexyl nitrate (Category 2 Chronic hazard). Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system. Do not otherwise release into the environment.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Considerations: Dispose according to all applicable Federal, State, and Local regulations.

SECTION 14 TRANSPORT INFORMATION

UN Number: UN1268

UN Proper Shipping Name: Petroleum Distillates, n.o.s. (Naphtha Solvent)

Transport Hazard Class(es): 3

Packing Group: III

Marine Pollutant: Yes (Trimethylbenzenes, 2-Ethylhexyl nitrate)

Special Precautions: Read safety instructions, SDS and emergency procedures before handling.

DOT Classification: Consumer Commodity ORM-D, or Limited Quantity.

SECTION 15 REGULATORY INFORMATION

US federal regulations: All components are listed in the United States TSCA Regulations.

CERCLA (Superfund) reportable quantity: None

SARA (Superfund Amendments and Reauthorization Act of 1986):


313 Components: 1,2,4 Trimethylbenzene (CAS# 95-63-6) 3.5%, 2-Butoxyethanol (CAS# 111-76-2) 3.3%,

Xylene (CAS# 1330-20-7) 1.7%, Cumene (CAS# 98-82-8) 0.13%

Section 302 extremely hazardous substance: No

Section 311 hazardous chemical: No

Canada: This Product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

California Proposition 65:  **WARNING:** This product can expose you to chemicals including Cumene, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov."

SECTION 16 OTHER INFORMATION

Further information: (HMIS® is a registered trade and service mark of the NPCA.)

HMIS® ratings Health: 3
 Flammability: 3
 Physical hazard: 0

NFPA ratings Health: 3
 Flammability: 3
 Instability: 0

Other: NA-Not Applicable, ND-Not Determined, NE-Not Established.

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