

1. PRODUCT AND COMPANY IDENTIFICATION**Product Identifier**

Product Name Diesel Clean Cetane Improver

Other means of identification

Product Code 1948

Details of the supplier of the safety data sheetCompany Name Blue Cardinal Chemical, LLC
3670 Scarlet Oak Blvd.
St. Louis, MO 63122
800-325-3312**Emergency telephone number**

Emergency Telephone CHEMTEL 1-800-255-3924

2. HAZARDS IDENTIFICATION**Classification****GHS-US classification**

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Muta. 1B	H340
Carc. 1B	H350
STOT SE 3	H335
STOT SE 3	H336
Asp. Tox. 1	H304

Label elements**Emergency Overview****DANGER****Hazard Statements**

Flammable liquid and vapor
Harmful if swallowed, in contact with skin or if inhaled
May be fatal if swallowed and enters airways
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation

May cause drowsiness or dizziness
 May cause genetic defects
 May cause cancer



Appearance: Clear, gold liquid

Physical state: Liquid

Odor: Solvent-like



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, open flames, sparks. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing fume, mist, spray, vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye protection, protective clothing, protective gloves.

Precautionary Statements - Response

If swallowed: Immediately call a doctor, a POISON CENTER. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable or breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a doctor, a POISON CENTER if you feel unwell. Rinse mouth.

Precautionary Statements - Storage

Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from: sparks, open flames, excessive heat. Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place. Keep locked up.

Precautionary Statements - Disposal

Dispose in a safe manner in accordance with local/national regulations.

Hazards not otherwise classified (HNOC)

Other Information

- No additional information available

Unknown Acute Toxicity

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Full text of H-phrases: see section 16

CHEMICAL NAME	CAS #	WEIGHT - %	GHS-US CLASSIFICATION	TRADE SECRET
SOLVESSO 100	64742-95-6	50-90	Flam. Liq. 3, H226 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304	*
Trimethylbenzene	25551-13-7	45-55	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Asp. Tox. 1, H304	*

CHEMICAL NAME	CAS #	WEIGHT - %	GHS-US CLASSIFICATION	TRADE SECRET
1,2,4-trimethylbenzene	95-63-6	15-40	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 STOT SE 3, H335 Aquatic Chronic 2, H411	*
2-ethylhexyl nitrate	27247-96-7	5-10	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332	*
cumene	98-82-8	4-9	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304	*
xylene	1330-20-7	0.5-5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315	*
cymenes	25155-15-1	0.5-1.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice	If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned Get medical advice/attention.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact	Take off immediately all contaminated clothing and wash it before reuse. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
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.
Ingestion	Immediately call a poison center or doctor/physician. Rinse mouth with water. Do NOT induce vomiting.

Most important symptoms and effect, both acute and delayed

Symptoms	Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer.
	After inhalation: Irritation of the respiratory tract. May cause drowsiness or dizziness. Central nervous system depression.
	After skin contact: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
	After eye contact: Causes serious eye irritation.
	After ingestion: May be fatal if swallowed and enters airways. Risk of aspiration pneumonia. Gastrointestinal complaints. Cramps. Nausea. Vomiting.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical powder. Carbon dioxide. Alcohol-resistant foam.

Specific hazards arising from the chemical

Flammable liquid and vapor. Vapors may travel long distances along ground before igniting/flashing back to vapor source. Upon combustion: CO and CO₂ are formed.

Protective equipment and precautions for firefighters

Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions Remove ignition sources. Use special care to avoid static electric charges.

For non-emergency personnel

Protective goggles. Gloves. Protective clothing.

Evacuate unnecessary personnel. No naked flames or sparks.

For emergency responders

Equip cleanup crew with proper protection.

Stop leak if safe to do so. Stop release. Ventilate area.

Environmental precautions

Environmental precautions Avoid release to the environment. Prevent entry to sewers and public waters.

Methods and material for containment and cleaning up**Methods for containment & cleaning up**

Contain released product, pump into suitable containers. This material and its container must be disposed of in a safe way, and as per local legislation. Take up liquid spill into inert absorbent material, e.g. sand/earth. Clean contaminated surfaces with a soap solution.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Do not breathe vapors. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking. Take precautions against electrostatic charges. Obtain special instructions before use. Remove contaminated clothing immediately. Wash thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities**Storage conditions**

Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed. Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place away from: sparks, open flames, excessive heat. Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place. Keep locked up. Keep only in original container. Meet the legal requirements.

Incompatible Materials

Strong oxidizers. Acids. Sources of ignition. Heat sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

TRIMETHYLBENZENE (25551-13-7)		
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	Remark (ACGIH)	CNS impair; asthma; hematologic eff

1,2,4-TRIMETHYLBENZENE (95-63-6)		
ACGIH	ACGIH TWA (ppm)	25 ppm

CUMENE (98-82-8)		
ACGIH	ACGIH TWA (ppm)	0.1 ppm
ACGIH	Remark (ACGIH)	Lung cancer; liver and lung dam; A2 (Suspected Human Carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence or carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans)
OSHA	OSHA PEL (TWA) (mg/m ³)	245 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

XYLENE (1330-20-7)		
ACGIH	ACGIH TWA (ppm)	100 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
ACGIH	Remark (ACGIH)	URT & eye irr; CNS impair
OSHA	OSHA PEL (TWA) (mg/m ³)	453 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Individual protection measures, such as personal protective equipment**Personal Protective Equipment**

Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Safety glasses. Protective goggles. Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear, gold liquid
Color	Clear, gold
Odor	Solvent-like
Odor Threshold	No data available

<u>Property</u>	<u>Values</u>
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	108 °F Closed Cup
Relative evaporation rate (butyl acetate=1)	No data available
Flammability (solid, gas)	No data available
Explosion limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Vapor pressure	No data available
Relative density	No data available
Relative vapor density at 20 °C	No data available
Specific gravity / density	0.87 g/mL
Solubility	Insoluble in water.
Log Pow	No data available
Log Kow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	< 20 cSt
Viscosity, dynamic	No data available

10. STABILITY AND REACTIVITY

Reactivity

Upon combustion: CO and CO₂ are formed.

Chemical Stability

No additional information available.

Possibility Of Hazardous Reactions

Refer to section 10.1 on Reactivity.

Conditions To Avoid

No additional information available.

Incompatible Materials

Oxidizing agents. Acids.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure Skin and eye contact

Product Information

Skin Contact Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Eye Contact Causes serious eye irritation.

Inhalation Irritation of the respiratory tract. May cause drowsiness or dizziness. Central nervous system depression.

Ingestion May be fatal if swallowed and enters airways. Risk of aspiration pneumonia. Gastrointestinal complaints. Cramps. Nausea. Vomiting.

Information on toxicological effects

Acute toxicity Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Dust, mist: Harmful if inhaled.

2-ETHYLHEXYL NITRATE (27247-96-7)	
LD50 oral rat	> 9600 mg/kg (Other, Rat, Male/female, Experimental value)
ATE CLP (oral)	500 mg/kg body weight
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h

TRIMETHYLBENZENE (25551-13-7)	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	1100 mg/kg

1,2,4-TRIMETHYLBENZENE (95-63-6)	
LD50 oral rat	6000 mg/kg body weight (EU Method B.1 tris: Acute oral toxic — Acute toxic class method, Rat, Male, Experimental value)
LD50 dermal rat	3440 mg/kg (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Read-across)
LC50 inhalation rat (mg/l)	10.2 mg/l air (Other, 4 h, Rat, Male/female, Read-across)
ATE CLP (oral)	6000 mg/kg body weight
ATE CLP (dermal)	3440 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h

SOLVESSO 100 (64742-95-6)	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit)

XYLENE (1330-20-7)	
LC50 inhalation rat (ppm)	4550 ppmV/4h
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	4550 ppmV/4h
ATE CLP (dust, mist)	1.5 mg/l/4h

CY MENES (25155-15-1)	
LD50 oral rat	> 2000 mg/kg (Rat)

Skin Corrosion/Irritation	Causes skin irritation.
Serious Eye Damage/Irritation	Causes serious eye irritation.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	May cause genetic defects.
Carcinogenicity	May cause cancer.

cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans

xylene (1330-20-7)	
IARC group	3 - Not classifiable

Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	May cause respiratory irritation. May cause drowsiness or dizziness.
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

2-ETHYLHEXYL NITRATE (27247-96-7)	
LC50 fish 1	2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 12.6 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	3.22 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

1,2,4-TRIMETHYLBENZENE (95-63-6)	
LC50 fish 1	7.72 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)

SOLVESSO 100 (64742-95-6)	
LC50 fish 1	18 mg/l (Pisces)
EC50 Daphnia 1	21 mg/l (Daphnia sp.)

Persistence and Degradability

2-ETHYLHEXYL NITRATE (27247-96-7)	
Persistence and degradability	Not readily biodegradable in water.

1,2,4-TRIMETHYLBENZENE (95-63-6)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
Chemical oxygen demand (COD)	0.44 g O ₂ /g substance

SOLVESSO 100 (64742-95-6)	
Persistence and degradability	Readily biodegradable in water.

CY MENES (25155-15-1)

Persistence and degradability	Biodegradability in water: no data available.
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Bioaccumulation**2-ETHYLHEXYL NITRATE (27247-96-7)**

Log Pow	Not readily biodegradable in water.
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5)

1,2,4-TRIMETHYLBENZENE (95-63-6)

BCF fish 1	31- 275 (Other, 8 week(s), Cyprinus carpio, Weight of evidence)
Log Pow	3.63 - 4.09 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

SOLVESSO 100 (64742-95-6)

Log Pow	> 3
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CY MENES (25155-15-1)

Bioaccumulative potential	No bioaccumulation data available.
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13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of Wastes Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

Department of Transportation (DOT)

Other information *When transported by ground in non-bulk containers, this product utilizes the exception found under 49 CFR 173.150. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may be required.*

ADR

No additional information available.

Transport by sea

No additional information available.

Air transport

No additional information available.

15. REGULATORY INFORMATION**International Inventories**

TSCA All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CHEMICAL NAME	CAS #	SARA 313-THRESHOLD VALUES %
1,2,4-trimethylbenzene	95-63-6	15-40%
cumene	98-82-8	4-9%
xylene	1330-20-7	0.5-5%

1,2,4-TRIMETHYLBENZENE (95-63-6)

Subject to reporting requirements of United States SARA Section 313

CUMENE (98-82-8)

Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	5000 lb
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XYLENE (1330-20-7)

Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	100 lb
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16. OTHER INFORMATION

Full text of H-phrases:

H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H320	Causes eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H411	Toxic to aquatic life with long lasting effects

NFPA	Health hazards	2	Flammability	2	Reactivity	0	Other	N/D
HMIS	Health hazards	N/D	Flammability	N/D	Reactivity	N/D	Personal protection	N/D

Issue Date

03/29/2018

Revision Date

Revision Note

N/A = Not Applicable; N/D = Not Determined

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet