



MATERIAL SAFETY DATA SHEET

QMI Diesel Fuel Additive with Cetane Booster

1. Product and company identification

Product use: Petrochemical industry: Diesel fuel detergent.

Validation date: 10/15/2008

In case of emergency - Chemical

QMI: (800) 255-8138
CHEM-TEL: (800) 255-3924

Distributed by:

QMI
3606 Craftsman Blvd.
Lakeland, FL 33803

2. Hazards identification

Notice to reader

Afton operates a world-wide system for hazard communication. Some hazards shown in Section 3 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Sections 2 and 15 for country specific classification information, and Section 11 for additional details.

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classified as hazardous according to the criteria of NOHSC and classified as dangerous goods according to the ADG Code.

Primary hazards and critical effects WARNING! CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

Physical/chemical hazards : COMBUSTIBLE. - United States and Canada
FLAMMABLE. - European Union
VAPOR MAY CAUSE FLASH FIRE.

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

Hazardous Material Information System (U.S.A.)

Health	1
Fire hazard	2
Reactivity	0

3. Composition and information on ingredients

Note: see section 8 for occupational exposure limits and section 11 for LC50/LD50 information.

Substance/Preparation : Preparation

Ingredient name

CAS no.

Conc. (% w/w) EU Classification

WHMIS Regulated?

Solvent naphtha (petroleum), light aromatic	64742-95-6	20- 30	R10 Xn; R65 Xi; R37 R66, R67 N; R51/53	Yes.
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	20- 30	Xn; R65 R66, R67 N; R51/53	Yes.
Benzene, 1,2,4-trimethyl-	95-63-6	10- 19.9	R10 Xn; R20 Xi; R36/37/38 N; R51/53	Yes.
2-Ethyl hexanol	104-76-7	5 -9.9	Xi; R36/38	Yes.
Benzene, 1,3,5-trimethyl-	108-67-8	1 -4.9	R10 Xi; R37 N; R51/53	Yes.
N-Propylbenzene	103-65-1	1 -4.9	R10 Xn; R65 Xi; R37 N; R51/53	Yes.
Naphthalene	91-20-3	1 -4.9	Carc. Cat. 3; R40 Xn; R22 N; R50/53	Yes.
Xylene	1330-20-7	1 -4.9	R10 Xn; R20/21 Xi; R38	Yes.
Cumene	98-82-8	1 -4.9	R10 Xn; R65 Xi; R37	Yes.

4. First aid measures

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.
Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

5. Fire-fighting measures

Extinguishing media	: In case of fire, use water spray (fog), foam, dry chemical, or CO ₂ .
Fire-fighting procedures	: Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Fire/explosion hazards	: COMBUSTIBLE. - United States and Canada FLAMMABLE. - European Union VAPOR MAY CAUSE FLASH FIRE. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Hazardous decomposition products	: These products are carbon oxides (CO, CO ₂).
Flash point	: Closed cup: 45°C (113°F). (Pensky-Martens. Minimum)

6. Accidental release measures

Personal precautions	: Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Do not touch or walk through spilled material.
Environmental precautions and clean-up methods	: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways.

7. Handling and storage

- Handling** : Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Keep container in a well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

8. Exposure controls and personal protection

Engineering controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors : below their respective threshold limit value.

Personal protective equipment

- Respiratory system** : Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).
- Skin and body** : Where contact is likely, wear chemical resistant gloves, a chemical resistant suit, and boots. Additional body garments should be used based upon the task being performed.
- Hands** : Use chemical resistant, impervious gloves.
- Eyes** : Safety goggles are considered minimum protection. Goggles with a face shield may be necessary depending on quantity of material and conditions of use.

Occupational exposure limits

Ingredient name	OEL United States	OEL Canada	OEL Europe	OEL Australia
1) Solvent naphtha (petroleum), light aromatic	OSHA (United States). TWA: 500 ppm 8 hour/hours.	OSHA (United States). TWA: 500 ppm 8 hour/hours.	OSHA (United States). TWA: 500 ppm 8 hour/hours.	
2) Solvent naphtha (petroleum), heavy aromatic	OSHA (United States). TWA: 500 ppm 8 hour/hours. TWA: 2000 mg/m ³ 8 hour/hours.	OSHA (United States). TWA: 500 ppm 8 hour/hours. TWA: 2000 mg/m ³ 8 hour/hours.	OSHA (United States). TWA: 500 ppm 8 hour/hours. TWA: 2000 mg/m ³ 8 hour/hours.	
3) Benzene, 1,2,4-trimethyl-	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
4) Benzene, 1,3,5-trimethyl-	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
5) Naphthalene	ACGIH (United States, 1996). TWA: 10 ppm STEL: 15 ppm OSHA (United States, 1989). TWA: 10 ppm	TWA: 10 ppm STEL: 15 ppm	EH40 (UK) (Europe, 2002). TWA: 10 ppm 8 hour/hours. STEL: 15 ppm 15 minute/minutes.	NOHSC (Australia, 2003). TWA: 10 ppm 8 hour/hours. STEL: 15 ppm 15 minute/minutes.
6) Xylene	ACGIH (United States, 1996). TWA: 100 ppm STEL: 150 ppm OSHA (United States). TWA: 100 ppm	TWA: 100 STEL: 150	EH40 (UK) (Europe, 2002). Skin TWA: 50 ppm 8 hour/hours. STEL: 100 ppm 15 minute/minutes.	NOHSC (Australia, 2003). STEL: 80 ppm 15 minute/minutes. STEL: 150 ppm 15 minute/minutes.
8) Cumene	ACGIH (United States, 1994). Skin TWA: 50 ppm OSHA (United States, 1989). Skin TWA: 50 ppm	TWA: 50 ppm	EH40 (UK) (Europe). Skin TWA: 25 ppm 8 hour/hours. TWA: 125 mg/m ³ 8 hour/hours. STEL: 250 mg/m ³ 15 minute/minutes.	NOHSC (Australia, 2003). Skin TWA: 25 ppm 8 hour/hours. STEL: 75 ppm 15 minute/minutes.

9. Physical and chemical properties

- Physical state and Appearance** : Liquid.
- Color** : Amber. (Dark.)
- Odor** : Amine-like
- Specific gravity** : 0.915 at 15.6°C
- Solubility** : Insoluble in cold water.
- Viscosity** : 21.1 cSt at 40°C

Flash point : Closed cup: 45°C (113°F). (Pensky-Martens. Minimum)

10. Stability and reactivity

- Stability** : The product is stable.
- Materials to avoid** : Strong oxidizing and reducing agents.
- Conditions to avoid** : High temperatures, sparks, and open flames.

11. Toxicological information

- Routes of entry** : Skin, Eyes, Ingestion, and Inhalation.
- Target organs** : Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, heart, spleen, gastrointestinal tract, upper respiratory tract, immune system, skin, eyes, central nervous system (CNS), nose/sinuses.
- Acute effects**
- Inhalation** : Irritating to respiratory system.
- Ingestion** : Ingestion may cause gastrointestinal irritation and diarrhea.
- Skin contact** : Irritating to skin.
Does not meet EU R38 classification criteria.
- Eye contact** : Irritating to eyes.
Does not meet EU R41 or R36 classification criteria.
- Adverse effects** : - 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.
- Adverse symptoms may include: This product contains trimethylbenzene. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals.
- Adverse symptoms may include: liver, kidneys, lungs, and heart effects by dermal route and immune system effects by ingestion route. Not a developmental toxicant when administered dermally. Weak carcinogenic liver response was observed in mice, but not rats.
- Adverse symptoms may include: This product contains trimethylbenzene. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals.
- Adverse symptoms may include: This product contains naphthalene. Naphthalene exposure may cause severe dermatitis in sensitized persons. Ingestion of naphthalene has caused hemolysis in humans deficient in glucose-6-phosphate dehydrogenase. Adverse effects could include liver and kidney abnormalities and corneal ulcerations and cataracts This product contains naphthalene. A National Toxicology Program (NTP) final report states that lifetime inhalation exposure to naphthalene resulted in increases in nose tumors in rats and lung tumors in female mice.
- Adverse symptoms may include: Central nervous system, liver, kidneys, and blood effects by inhalation and heart beat irregularity (arrhythmia) 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.
- Carcinogenic effects** : Classified 2B (Possible for humans.) by IARC [Naphthalene]. Classified 2 (Reasonably anticipated to be human carcinogens.) by NTP [Naphthalene].
Classified 3 (Limited evidence of a carcinogenic effect.) by European Union [Naphthalene].

Toxicity data

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Not determined.				

Other information : Not available.

12. Ecological information

- Environmental hazards** : Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Based on calculation.
- Environmental fate** : This product contains components which may be persistent in the environment.

13. Disposal considerations

Waste handling and disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	NA1993	Combustible liquids, n.o.s. (Xylene, Petroleum distillates)	Combustible liquid.	III		
TDG Classification	UN1993	Flammable liquids, n.o.s. (Xylene, Petroleum distillates)	3	III		
ADR/RID Class	UN1993	Flammable liquids, n.o.s. (Xylene, Petroleum distillates)	3	III		Hazard identification number 30
IMDG Class	UN1993	Flammable liquids, n.o.s. (Xylene, Petroleum distillates)	3	III		
IATA-DGR Class	UN1993	Flammable liquids, n.o.s. (Xylene, Petroleum distillates)	3	III		
ADG Class	UN1993	Flammable liquids, n.o.s. (Xylene, Petroleum distillates)	3	III		

Notice to reader

The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

15. Regulatory information

EU regulations**Hazard symbol(s)**

:



Harmful, Dangerous for the environment.

Risk phrases

: R10- Flammable.
 R40- Limited evidence of a carcinogenic effect.
 R37- Irritating to respiratory system.
 R66- Repeated exposure may cause skin dryness or cracking.
 R67- Vapors may cause drowsiness and dizziness.
 R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 S16- Keep away from sources of ignition - No smoking.
 S23- Do not breathe vapor.
 S36/37- Wear suitable protective clothing and gloves.
 S57- Use appropriate containment to avoid environmental contamination.

Safety phrases**Contains**

Naphthalene

US regulations**SARA 313 toxic chemical notification and release reporting (w/w%)**

Benzene, 1,2,4-trimethyl-	10 - 19.9
Naphthalene	1 - 4.9
Xylene	1 - 4.9
Cumene	1 - 4.9
BENZO[A]PYRENE	0.001-0.005

SARA 311/312 Hazardous Categorization

: SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

RQ (Reportable quantity) : CERCLA: Hazardous substances.: Benzene: 10 lbs. (4.536 kg); Naphthalene: 100 lbs. (45.36 kg); Benzo [a]pyrene: 1 lb. (0.4536 kg); Ethylbenzene: 1000 lbs. (453.6 kg); Xylene: 100 lbs. (45.36 kg); CUMENE: 5000 lbs. (2268 kg)

State - California Prop. 65 : This product contains chemical/chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: Benzene; ; Naphthalene; Benzo[a]pyrene; Ethylbenzene

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-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

International Inventory Status

United States All components on TSCA Inventory
Canada All components on DSL
Europe Japan All components on EINECS
Australia ▪ One or more components not found on METI
Korea All components on NICNAS All components
China on ECL All components on IECSC
Philippines ▪ All components on PICCS

16. Other information

Notice to reader

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. Afton makes no representation as to completeness or accuracy. In no event will Afton be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.