

**1. Identification**

<b>Product identifier</b>	<b>Cetane Booster &amp; Performance Improver</b>
<b>Other means of identification</b>	
<b>FIR No.</b>	178699
<b>Recommended use</b>	Diesel fuel additive
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Supplier</b>	
<b>Company Name</b>	Ford Motor Company
<b>Address</b>	Attention: MSDS Information, P.O. Box 1899 Dearborn, Michigan 48121 USA
<b>Telephone</b>	1-800-392-3673
<b>MSDS Information</b>	1-800-448-2063 msds@brownart.com
<b>Emergency telephone numbers</b>	Poison Control Center: USA and Canada: 1-800-959-3673 INFOTRAC (Transportation): USA and Canada 1-800-535-5053

**2. Hazard(s) identification**

<b>Physical hazards</b>	Flammable liquids	Category 4
<b>Health hazards</b>	Carcinogenicity	Category 2
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**

<b>Signal word</b>	Danger
<b>Hazard statement</b>	Combustible liquid. May be fatal if swallowed and enters airways. Suspected of causing cancer. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.
<b>Storage</b>	Store in a well-ventilated place. Keep cool. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Aspiration may cause pulmonary edema and pneumonitis. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May irritate eyes and skin. May cause irritation of respiratory tract. May be harmful if absorbed through skin.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), hydrotreated light		64742-47-8	60 - < 70
1,2,4-TRIMETHYLBENZENE		95-63-6	1 - < 3
2-Ethylhexan-1-ol		104-76-7	1 - < 3
NAPHTHALENE		91-20-3	1 - < 3
Solvent naphtha (petroleum), heavy arom.		64742-94-5	1 - < 3
TRIMETHYLBENZENE		25551-13-7	1 - < 3

Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Diarrhea. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Dry chemicals. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Combustible liquid.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

**7. Handling and storage**

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke. Avoid contact with eyes. Avoid breathing vapor. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

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

Store locked up. Keep away from heat and sources of ignition. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
NAPHTHALENE (CAS 91-20-3)	PEL	50 mg/m3
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)	PEL	10 ppm 400 mg/m3
		100 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)	TWA	25 ppm
NAPHTHALENE (CAS 91-20-3)	TWA	10 ppm
TRIMETHYLBENZENE (CAS 25551-13-7)	TWA	25 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)	TWA	125 mg/m3
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	25 ppm 100 mg/m3
NAPHTHALENE (CAS 91-20-3)	STEL	75 mg/m3
	TWA	15 ppm 50 mg/m3 10 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)	TWA	400 mg/m3  100 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines****US ACGIH Threshold Limit Values: Skin designation**

NAPHTHALENE (CAS 91-20-3)

Can be absorbed through the skin.

**Appropriate engineering controls**

Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Suitable chemical protective gloves should be worn when the potential exists for prolonged or repeated skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile gloves are recommended.

**Other**

Wear suitable protective clothing. Wear appropriate chemical resistant clothing if applicable.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance****Physical state**

Liquid.

**Form**

Liquid.

**Color**

Amber.

**Odor**

Solvent.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

359.96 °F (182.2 °C) (360°F)

**Flash point**

150.8 °F (66.0 °C) PMCC

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not applicable.

**Upper/lower flammability or explosive limits****Explosive limit - lower (%)** 0.7 %**Explosive limit - upper (%)** 6 %**Vapor pressure**

0.1 mm Hg

**Vapor pressure temp.**

20 °C

**Vapor density**

Not available.

**Relative density**

0.86

<b>Relative density temperature</b>	39.2 °F (4 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	NEGLIGIBLE
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Kinematic viscosity</b>	2 - 4 cSt
<b>Kinematic viscosity temperature</b>	104 °F (40 °C)
<b>VOC (Weight %)</b>	100 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
<b>Skin contact</b>	May be harmful in contact with skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics** Diarrhea. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis.

### Information on toxicological effects

**Acute toxicity** May be fatal if swallowed and enters airways.

Components	Species	Calculated/Test Results
1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2000 ppm, 48 Hours
<i>Oral</i>		
LD50	Rat	6 g/kg
2-Ethylhexan-1-ol (CAS 104-76-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	> 8300 mg/kg
	Rabbit	1986 mg/kg

Components	Species	Calculated/Test Results
<i>Inhalation</i>		
LC50	Guinea pig	> 227 ppm, 6 Hours
	Rat	> 227 ppm, 6 Hours
<i>Oral</i>		
LD50	Rat	2053 mg/kg
NAPHTHALENE (CAS 91-20-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2 g/kg
	Rat	> 20 g/kg
<i>Oral</i>		
LD50	Guinea pig	1200 mg/kg
	Rat	490 mg/kg
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	61 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	> 25 ml/kg
TRIMETHYLBENZENE (CAS 25551-13-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	8970 mg/kg
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Suspected of causing cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
NAPHTHALENE (CAS 91-20-3)		2B Possibly carcinogenic to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Not listed.		
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>		
NAPHTHALENE (CAS 91-20-3)		Reasonably Anticipated to be a Human Carcinogen.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	
<b>12. Ecological information</b>		
<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.	

## Ecotoxicity

Components	Species	Calculated/Test Results
1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 7.19 - 8.28 mg/l, 96 hours
2-Ethylhexan-1-ol (CAS 104-76-7)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 10 - 33 mg/l, 96 hours
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
<b>Aquatic</b>		
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) 2.9 mg/l, 96 hours
NAPHTHALENE (CAS 91-20-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon ( <i>Oncorhynchus gorbuscha</i> ) 1.11 - 1.68 mg/l, 96 hours
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> ) 2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) 8.8 mg/l, 96 hours
		8.8 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

### Bioaccumulative potential

#### Partition coefficient n-octanol / water (log Kow)

NAPHTHALENE 3.3

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

#### <Unspecified>

Not regulated as dangerous goods.

### IATA

#### <Unspecified>

Not regulated as dangerous goods.

### IMDG

#### <Unspecified>

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

NAPHTHALENE (CAS 91-20-3) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
1,2,4-TRIMETHYLBENZENE	95-63-6	1 - < 3
NAPHTHALENE	91-20-3	1 - < 3

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

NAPHTHALENE (CAS 91-20-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)  
2-Ethylhexan-1-ol (CAS 104-76-7)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)  
NAPHTHALENE (CAS 91-20-3)  
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)  
TRIMETHYLBENZENE (CAS 25551-13-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)  
NAPHTHALENE (CAS 91-20-3)  
Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5)  
TRIMETHYLBENZENE (CAS 25551-13-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4-TRIMETHYLBENZENE (CAS 95-63-6)  
2-Ethylhexan-1-ol (CAS 104-76-7)  
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)  
NAPHTHALENE (CAS 91-20-3)



TRIMETHYLBENZENE (CAS 25551-13-7)

**US. Rhode Island RTK**

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

NAPHTHALENE (CAS 91-20-3)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**International Inventories**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**16. Other information, including date of preparation or last revision**

**Issue date** 05-19-2015

**Version #** 01

**HMIS® ratings** Health: 2  
Flammability: 3  
Physical hazard: 0

**NFPA ratings** Health: 2  
Flammability: 2  
Instability: 0

**Preparation Information and Disclaimer**

This document was prepared by FCSD-Toxicology, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

**Part number(s)** PM-22-A, PM-22-ASU, PM-22-GAL