

1. Identification

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|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--|
| Product identifier | Anti-Gel & Performance Improver | |
| Other means of identification | | |
| FIR No. | 178695 | |
| Recommended use | Diesel fuel additive | |
| Recommended restrictions | None known. | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Company Name | Ford Motor Company | |
| Address | Attention: SDS Information, P.O. Box 1899 Dearborn, Michigan 48121 USA | |
| Telephone | 1-800-392-3673 | |
| SDS Information | 1-800-448-2063 (USA and Canada) fordsds.com | |
| Emergency telephone numbers | Poison Control Center: USA and Canada: 1-800-959-3673 INFOTRAC (Transportation): USA and Canada 1-800-535-5053 | |

2. Hazard(s) identification

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

Label elements



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

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|---------------------------------------------|--------------------------|------------|------|
| Distillates (petroleum), hydrotreated light | | 64742-47-8 | 94.1 |
| Solvent naphtha (petroleum), heavy arom. | | 64742-94-5 | 3 |
| 1,2,4-TRIMETHYLBENZENE | | 95-63-6 | 1 |
| TRIMETHYLBENZENE | | 25551-13-7 | 1 |
| NAPHTHALENE | | 91-20-3 | 0.9 |

4. First-aid measures

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|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Take off immediately all contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |
| Ingestion | 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. |
| Most important symptoms/effects, acute and delayed | Aspiration may cause pulmonary edema and pneumonitis. Headache. Nausea, vomiting. Diarrhea. Direct contact with eyes may cause temporary irritation. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| General information | 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

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|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | Water fog. Alcohol resistant foam. Dry chemical powder. Dry chemicals. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | 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. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | 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. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Combustible liquid. |

6. Accidental release measures

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

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

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

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. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Avoid prolonged exposure. Use only in well-ventilated areas. When using do not smoke. Keep away from open flames, hot surfaces and sources of ignition. Should be handled in closed systems, if possible. Avoid release to the environment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Wear appropriate personal protective equipment. For personal protection, see Section 8 of the SDS.

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 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**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known 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 |
| | | 10 ppm |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | PEL | 400 mg/m3 |
| | | 100 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|-----------------------------------------------------------|------|-----------|--------------|
| 1,2,4-TRIMETHYLBENZENE (CAS 95-63-6) | TWA | 25 ppm | |
| NAPHTHALENE (CAS 91-20-3) | TWA | 10 ppm | |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | TWA | 200 mg/m3 | Non-aerosol. |
| 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 |
| | | 25 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|--------------------------------------------------------------|------|--------------------------------|
| Distillates (petroleum), hydrotreated light (CAS 64742-47-8) | TWA | 100 mg/m ³ |
| NAPHTHALENE (CAS 91-20-3) | STEL | 75 mg/m ³ |
| | | 15 ppm |
| | TWA | 50 mg/m ³ 10 ppm |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | TWA | 400 mg/m ³ |
| | | 100 ppm |
| TRIMETHYLBENZENE (CAS 25551-13-7) | TWA | 125 mg/m ³ |
| | | 25 ppm |

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

Exposure guidelines**US - California OELs: Skin designation**

NAPHTHALENE (CAS 91-20-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

NAPHTHALENE (CAS 91-20-3) Can be absorbed through the skin.

Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) 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, appropriate 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 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 appropriate chemical resistant clothing if applicable.

Respiratory protection 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 Observe any medical surveillance requirements. 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) |
| Flash point | 173.8 °F (78.8 °C) ASTM D56 |
| 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. | 68 °F (20 °C) |
| Vapor density | Not available. |
| Relative density | 0.82 |
| Relative density temperature | 39.2 °F (4 °C) |
| Solubility(ies) | |
| Solubility (water) | NEGLIGIBLE |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | 2 - 4 cSt |
| Viscosity temperature | 104 °F (40 °C) |
| Other information | |
| VOC | 100 % |

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

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|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation | May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. |
| Skin contact | Harmful if absorbed through skin. May be irritating to the skin. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | 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 | Aspiration may cause pulmonary edema and pneumonitis. Headache. Nausea, vomiting. Diarrhea. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

Information on toxicological effects

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|-----------------------|-----------------------------------------------|
| Acute toxicity | May be fatal if swallowed and enters airways. |
|-----------------------|-----------------------------------------------|

| Components | Species | Calculated/Test Results |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------|
| 1,2,4-TRIMETHYLBENZENE (CAS 95-63-6) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 3160 mg/kg |
| Inhalation | | |
| LC50 | Rat | > 2000 ppm, 48 Hours |
| Oral | | |
| LD50 | Rat | 6 g/kg |
| NAPHTHALENE (CAS 91-20-3) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 2 g/kg |
| | Rat | > 20 g/kg |
| Oral | | |
| LD50 | Guinea pig | 1200 mg/kg |
| | Rat | 2400 mg/kg |
| | | 2200 mg/kg |
| | | 490 mg/kg |
| | | 2.6 g/kg |
| Other | | |
| LD50 | Mouse | 969 mg/kg |
| | | 710 mg/kg |
| | | 533 mg/kg |
| | | 150 mg/kg |
| | | 100 mg/kg |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | | |
| Acute | | |
| Inhalation | | |
| LC50 | Rat | 73680 mg/l, 4 Hours |
| | | 61 mg/l, 4 Hours |
| Oral | | |
| LD50 | Rat | > 25 ml/kg |
| Other | | |
| LD50 | Rabbit | > 5 mg/kg, 4 Hours |
| TRIMETHYLBENZENE (CAS 25551-13-7) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | 8970 mg/kg |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. | |
| Serious eye damage/eye irritation | Direct contact with eyes may cause temporary irritation. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | This product is not expected to cause skin sensitization. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | Suspected of causing cancer. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| NAPHTHALENE (CAS 91-20-3) | 2B Possibly carcinogenic to humans. | |

US. National Toxicology Program (NTP) Report on Carcinogens

NAPHTHALENE (CAS 91-20-3)

Reasonably Anticipated to be a Human Carcinogen.

| | |
|-----------------------------------------------------------|------------------------------------------------------------------------------------|
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. |
| Specific target organ toxicity - single exposure | Not classified. |
| Specific target organ toxicity - repeated exposure | Not classified. |
| Aspiration hazard | May be fatal if swallowed and enters airways. |
| Chronic effects | Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. |

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Ecotoxicity

| Components | Species | Calculated/Test Results |
|--------------------------------------------------------------|---------|---------------------------------------------------------------------------------|
| 1,2,4-TRIMETHYLBENZENE (CAS 95-63-6) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) 7.19 - 8.28 mg/l, 96 hours |
| Distillates (petroleum), hydrotreated light (CAS 64742-47-8) | | |
| Aquatic | | |
| Fish | LC50 | Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>) 2.9 mg/l, 96 hours |
| NAPHTHALENE (CAS 91-20-3) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (<i>Daphnia magna</i>) 1.09 - 3.4 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (<i>Oncorhynchus gorbuscha</i>) 0.95 - 1.62 mg/l, 96 hours |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | | |
| Aquatic | | |
| 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 any ingredients in the mixture.

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

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

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

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)

Not listed.

SARA 304 Emergency release notification

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
Carcinogenicity
Aspiration hazard

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|------------------------|------------|----------|
| 1,2,4-TRIMETHYLBENZENE | 95-63-6 | 1 |
| NAPHTHALENE | 91-20-3 | 0.9 |

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

California Proposition 65



WARNING: This product can expose you to NAPHTHALENE, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

NAPHTHALENE (CAS 91-20-3)

Listed: April 19, 2002

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 07-31-2018

Revision date 07-31-2018

Version 02

HMIS® ratings

Health: 2
Flammability: 2
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, Fairlane Business Park IV, 17225 Federal 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.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Part number(s)

PM-23-A, PM-23-ASU, PM-23-GAL