



Safety Data Sheet

AFC-710

Section 1: Product and Company Identification

Product Name	AFC-710	Multifunctional Fuel Additive Concentrate
Manufacturer/Distributor	AXI International 5400 Division Drive Fort Myers, FL 33905	
Phone Numbers		
Product Information	1-877-425-4239	
Medical Emergency	1-888-255-3924 (In USA) +1-813-248-0573 (Outside USA)	

Section 2: Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

GHS Classification of the product:

Flammable Liquids:	Category 4
Serious eye damage/eye irritation:	Category 2A
Respiratory Sensitization:	Category 1
Skin Sensitization:	Category 1
Carcinogenicity:	Category 2
Toxicity to Reproduction (Fertility):	Category 2
Specific Target Organ Toxicity - Single Exposure (Narcotic Effects):	Category 3
Aquatic Chronic, Hazardous to the aquatic environment:	Category 2

Label Elements:

Pictogram:



Signal Word: Danger

Hazard Statements:

- H227 Combustible liquid
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H336 May cause drowsiness or dizziness
- H361 Suspected of damaging fertility or the unborn child
- H351 Suspected of causing cancer
- H401 Toxic to aquatic life
- H411 Toxic to aquatic life with long lasting effects

Precautionary Statements (Prevention):

- P201 Obtain special instructions before use
- 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
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash hands with plenty of water and soap thoroughly after handling
- P271 Use only outdoors or in a well-ventilated area
- P272 Contaminated work clothing should not be allowed out of the workplace
- P273 Avoid release to the environment
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P284 In case of inadequate ventilation wear respiratory protection.

Precautionary Statements (Response):

- P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician
- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- P331 Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P303 + P352 + P363 IF ON SKIN (or hair): Wash with plenty of soap and water. Wash contaminated clothing before reuse
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
- P370 + P378 In case of fire: Use water fog, foam, dry chemical or carbon dioxide to extinguish

Precautionary Statements (Storage):

- P405 Store locked up
- P403 + P233 + P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Precautionary Statements (Disposal):

- P501 Dispose of contents/container to hazardous or special waste collection point in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified: None known

Contains material which causes damage to following organs: blood, upper respiratory tract, skin, central nervous system (CNS), eyes, lens or cornea

Contains material which may cause damage to following organs: kidneys, lungs, liver, the reproductive system, spleen

Section 3: Composition/ Information on Ingredients

Substance/Mixture: Mixture

Components	CAS Number	Wt %
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	25 - 50
Naphthalene	91-20-3	0.5 - 5
1,2,4-trimethylbenzene	95-63-6	0.5 - 5
Phenol, dodecyl - branched	210555-94-5	0.5 - 5
2, 6-Di-tertiary-Butylphenol	128-39-2	5 - 15
2, 4, 6-Tri-tertiary-Butylphenol	732-26-3	0.5 - 2.5
Ethylenediamine; 1,2-diaminoethane	107-15-3	0.1 - 1
Proprietary Additive	Trade Secret	0.5 - 1.1
Distillates, petroleum, hydrotreated light	64742-47-8	0.5 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4: First Aid Measures

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact

Wash skin with plenty of soap and water after contact. Wash contaminated clothing before reuse.

Eye Contact

In case of contact immediately, flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion

If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

If ingestion has occurred within the past hour, protect the airway and perform gastric lavage followed by the administration of activated charcoal. If greater than one hour since ingestion, protect the airway as needed and administer activated charcoal.

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection for first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5: Fire Fighting Measures

Flammable Properties:

Flash Point: > 142 °F (> 61 °C) (**Method:** Closed Cup) **Burn Rate:** Unknown

Flammable Limits:

Lower Flammable Limit: Not Established

Upper Flammable Limit: Not Established

Flammability Classification: Combustible Liquid

Autoignition Temperature: Not Established

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen

Extinguishing Media: Water Spray, Foam, Dry Chemical, and CO₂.

Additional Considerations: Risk of explosion if heated under confinement.

FIRE FIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus. Wear full protective equipment.

NFPA RATING:

Health: 2

Flammability: 2

Reactivity: 0

PPE: C

Section 6: Accidental Release Measures

Note: Review Fire Fighting Measures and Handling (Personnel) Sections before proceeding with clean up. Use appropriate Personal Protective Equipment during clean up. Soak up with sawdust, sand, oil dry or other absorbent material. Remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean-Up

Soak up with sawdust, sand, oil dry or other absorbent material.

Accidental Release Measures

Spills are very slippery and should be cleaned up promptly. Unless released material is cleaned up immediately for reprocessing, recycling, or reuse, a release of 100 lbs. may trigger the reporting requirements of CERCLA Section 103.

Section 7: Handling and Storage

Handling: Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Storage: Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flames. Store in accordance with National Fire Protection Association recommendations.

Incompatible materials: Strong oxidizers.

Special Packaging Materials: Not applicable

Section 8: Exposure Control/ Personal Protection

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Personal Protective Equipment

Eye/Face Protection: Wear coverall chemical splash goggles or safety glasses.

Skin Protection: Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, hood and jacket.

Respirators: Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Exposure Limits

Solvent naphtha (petroleum), heavy aromatic:

PEL (OSHA): 100 ppm, 8 hr TWA, 400 mg/m³, 8 hr TWA
TLV (ACGIH): Not available

1, 2, 4-trimethylbenzene:

PEL (OSHA): None established
TLV (ACGIH): 25 ppm, 8 hr TWA

Naphthalene:

PEL (OSHA): 10 ppm, 50 mg/m³, 8 hr TWA
TLV (ACGIH): STEL 15 ppm, 79 mg/m³, A4 10ppm, 52 mg/m³, 8 hr TWA, Skin; A4

Ethylenediamine; 1,2-diaminoethane:

PEL (OSHA): 10 ppm, 25 mg/m³, 8 hr TWA
TLV (ACGIH): 10 ppm, 8 hr TWA, Absorbed through skin

2, 6-Di-tertiary-Butylphenol: Not Established.
An internal limit for 2, 6-Di-tertiary-Butylphenol is 10 ppm

Petroleum distillates (CAS: 64742-47-8):

PEL (OSHA):	None established
TLV (ACGIH):	None established
Manufacturer:	100 ppm (525 mg/m ³) for 8-hour TWA

Proprietary Additive:

PEL (OSHA):	5 mg/m ³ , 8 hr TWA (Form: Respirable Fraction)
TLV (ACGIH):	10 mg/m ³ , 8 hr TWA,

Section 9: Physical and Chemical Properties

Appearance:	Amber
Odor:	Aromatic
Physical State:	Liquid
pH:	Not Available
Boiling Point:	Not Available
Pour Point:	<-51 °C
Solubility in Water:	Slightly dispersible in following: cold water, warm water
Vapor Pressure (psi):	Not Available
Evaporation Rate:	Not Available
Specific Gravity:	0.94 @ 60/60°F (16/16°C)
Density (lb/gal):	7.84 @ 60°F (16°C)
Viscosity, kinematic (cSt):	Not Available

Section 10: Stability and Reactivity

Chemical Stability: Product is stable under normal temperatures and storage conditions.

Incompatibility with other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Decomposes with heat. Hazardous gases/vapors produced are oxides of nitrogen and carbon monoxide.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Inhalation: Harmful by inhalation.

Ingestion: Harmful if swallowed.

Skin Contact: Harmful in contact with skin. Irritating to skin. May cause sensitisation by skin contact.

Eye Contact: Irritating to eyes.

Animal Data**Solvent naphtha (petroleum), heavy aromatic:**

Inhalation 6 hour LC50: > 11.67 mg/L in rats
Skin Absorption LD50: > 3,160 mg/kg in rabbits
Oral LD50: > 5,000 mg/kg in rats

Naphthalene:

Inhalation 15 minute LC50: >0.34 mg/L in rats
Skin Absorption LD50: 10,000 mg/kg in rabbits
Oral LD50: 1,780 mg/kg in rats

Phenol, dodecyl-branched:

Skin absorption LD50: 5000 mg/kg in rabbit
Oral LD50: 2,100 mg/kg in rats

Ethylenediamine; 1,2-diaminoethane:

Inhalation LC50: 14700 mg/m³ in rats
Skin Absorption LD50: 560 mg/kg in rabbits
Oral LD50: 866 mg/kg in rabbits

2, 4, 6-Tri-tertiary-Butylphenol:

Oral LD50: 1,670 mg/kg in rats

2, 6-Di-tertiary-Butylphenol:

Skin absorption, Dermal LD50: >10,000 mg/kg in rabbits
Oral LD50: >5,000 mg/kg in rats

Proprietary Additive:

Skin Absorption LD50: >2000 mg/kg in rats
Oral LD50: 1320 mg/kg in rats

Petroleum distillates (CAS: 64742-47-8):

Inhalation 4 hour LC50: > 6.8 mg/l in rats
Skin absorption LD50: 2,000 - 4,000 mg/kg in rabbits
Oral LD50: >5,000 mg/kg in rats

Aspiration Hazard:

Solvent naphtha (petroleum), heavy aromatic: Aspiration Hazard Category 1

Section 12: Ecological Information**Solvent naphtha (petroleum), heavy aromatic:**

96 hours Acute LC50, Fish : 2 – 5 mg/l
72 hours Acute EC50, Algae : 1 – 3 mg/l
48 hours Acute EC50, Daphnia : 3 – 10 mg/l

Naphthalene:

96 hours Acute LC50, Fish : 1.6 mg/l
 48 hours Acute EC50, Daphnia Magna : 1.96 mg/l (Fresh Water)
 48 hours Acute LC50, Crustaceans : 2350 µg/l (Marine Water)

1,2,4-trimethylbenzene:

96 hours Acute LC50, Fish : 7.72 mg/l

Phenol, dodecyl-branched:

96 hours Acute LC50, Fish : 24 mg/l
 48 hours Acute EC50, Daphnia Magna : 0.037 mg/l
 96 hours LC50, Fish- Atlantic Salmon : 0.14 mg/l

Ethylenediamine; 1,2-diaminoethane:

72 hours Acute LC50, Alage : 645 mg/l (Fresh Water)
 48 hours Acute EC50, Daphnia Magna : 16.7 mg/l (Fresh Water)
 96 hours Acute LC50, Fish : 115.7 mg/l (Marine Water)

2, 6-Di-tertiary-Butylphenol and 2, 4, 6-Tri-tertiary-Butylphenol Mixture:

96 hour LC50, Rainbow Trout: 0.1 – 1.0 mg/L
 3 hour EC50, Bacteria: >1000 mg/L

Proprietary Additive:

48 hours Acute LC50, Fish : 24.5 mg/l
 24 hours Acute LC50, Daphnia : 2.5 mg/l
 72 hours Acute EC50, Algae : 1.03 mg/l
 6 hours Acute EC50, Micro-Organism : >87.6 mg/l

Petroleum distillates (CAS: 64742-47-8):

Aquatic toxicity: Not toxic to aquatic organisms (fish, daphnia, algae) up to water solubility.

Toxicity to fish:	No data available
Toxicity to aquatic invertebrates:	No data available
Toxicity to algae:	No data available
Biodegradation:	Readily biodegradable. OECD Test Guideline 301F (28 d): 85 %
Bioaccumulation:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

Section 13: Disposal Considerations

Waste Disposal: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

Section 14: Transport Information

DOT

Proper Shipping Name: Combustible Liquid, n.o.s. (Solvent naphtha (petroleum), heavy aromatic)
 Hazard Class: Combustible
 I.D. No. (UN/NA): NA1993
 Packing Group: III
 Special Information: Not regulated for containers less than 119 gallons capacity
 Marine Pollutant: Yes (Heavy Aromatic Naphtha, Mixed Tertiary Butyl Phenols)
 Reportable Quantity: Naphthalene 100 lbs
 DOT Label(s): Combustible Liquid, Marine Pollutant

IMO

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, Mixed tertiary butyl phenols)
 Hazard Class: 9
 I.D. No. (UN/NA): UN3082
 Packing Group: III
 Marine Pollutant: Yes (Solvent Petroleum Naphtha, Mixed Tertiary Butyl Phenols)
 Special Information: Flash Point > 61 °C
 IMO/IMDG Label(s): Miscellaneous Hazardous Substance, Marine Pollutant

IATA

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Solvent naphtha (petroleum), heavy aromatic, Mixed tertiary butyl phenols)
 Hazard Class: 9
 I.D. No. (UN/NA): UN3082
 Packing Group: III
 IATA/ICAO Label(s): Miscellaneous Hazardous Substance, Marine Pollutant

Section 15: Regulatory Information

U.S. Federal Regulations:

TSCA: All components appear/exempt in TSCA Inventory

Clean Water Act (CWA) 307: Naphthalene; Phenol

CERCLA SARA HAZARD CATEGORY:

Section 302/304: Ethylenediamine; 1,2-diaminoethane (0.09 – 0.99%)
 Formaldehyde (0.0 – 0.09%)
 Phenol (0.0 – 0.07%)

Section 311 and 312: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: Fire Hazard, Acute Hazard, Chronic Hazard.

Section 313: This product contains following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: Naphthalene (0.05 - 5 %); 1,2,4-trimethylbenzene (0.05 - 5%);

CERCLA RQ:

Naphthalene: RQ 100 lbs

State regulations:

Naphthalene, 1,2,4-trimethylbenzene, Dicyclopentadienyl iron can be found on one of the following state right to know lists: New York, New Jersey, Pennsylvania, Massachusetts.

California Prop. 65: This product contains following chemical(s) known to the State of California to cause cancer: Naphthalene (0.5 - 5%), Formaldehyde (<100 ppm)

International Regulations:

Canadian WHMIS: Additional information available upon request

Canadian Environmental Protection Act (CEPA): Additional information available upon request.

EINECS: Additional information available upon request.

Section 16: Other Information

The information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of AXI International. The Data on this sheet related only to the specific material designed herein. AXI International assumes no legal responsibility for the use or reliance on this data.

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