

# SAFETY DATA SHEET

AFC 710 Tier-4 Diesel Additive Technology

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## AXI INTERNATIONAL

5400 Division Dr. | Fort Myers, FL 33905 (877) 425-4239

### SECTION 1 ----- PRODUCT / CHEMICAL IDENTIFICATION-----

**PRODUCT NAME:** AFC 710 Tier-4 Diesel Additive Technology

**MANUFACTURER:** AXI INTERNATIONAL, 5400 Division Dr. | Fort Myers, FL 33905 (877) 425-4239

**EMERGENCY TELEPHONE NUMBERS:** CHEMTREC® - ONLY IN THE EVENT OF A CHEMICAL EMERGENCY INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT (800) 424-9300 – USA (202) 483-7616 (collect) – INTERNATIONAL

**USE:** APPROVED FOR USE IN ALL HYDROCARBON FUEL TO IMPROVE FUEL STABILITY AND COMBUSTION EFFICIENCY. FOLLOW DOSING INSTRUCTIONS PROVIDED ON PACKAGE. NOT RECOMMENDED AS A FUEL, OR TO BE USED IN LUBRICATION. THIS PRODUCT HAS NOT BEEN EVALUATED BY THE FAA AND IS NOT APPROVED FOR USE IN AVIATION.

### SECTION 2 -----PRODUCT INFORMATION / COMPOSITION-----

| <u>MATERIAL</u>                              | <u>CAS NUMBER</u> | <u>%</u> |
|--|-------------------|----------|
| <b>PROPRIETARY ADDITIVE PACKAGE</b>          | *                 | *        |
| <b>C6-C16 Hydrocarbon Distillate Mixture</b> | *                 | *        |

\* THE SPECIFIC CHEMICAL IDENTITY AND/OR EXACT PERCENTAGE (CONCENTRATION) OF COMPOSITION HAS BEEN WITHHELD AS A TRADE SECRET CLAIM GRANTED ON JULY 27, 2004 WITH HMIRC REGISTRATION NUMBER 5507

### SECTION 3 -----HAZARD IDENTIFICATION-----

**APPEARANCE:** Amber

**PHYSICAL FORM:** Liquid

#### EMERGENCY OVERVIEW

WARNING!

HEALTH HAZARDS

ASPIRATION HAZARD IF SWALLOWED-CAN ENTER LUNGS AND CAUSE DAMAGE

MAY CAUSE CARDIAC SENSITIZATION

OVEREXPOSURE MAY CAUSE CNS DEPRESSION

MAY BE IRRITATING TO THE SKIN, EYES AND RESPIRATORY TRACT

SEE "TOXICOLOGICAL INFORMATION" (SECTION 11) FOR MORE INFORMATION

FLAMMABILITY HAZARDS

**COMBUSTIBLE LIQUID AND VAPOR**

PER CANADIAN CPR SECTION 38

REACTIVITY HAZARDS

STABLE

#### POTENTIAL HEALTH EFFECTS, SKIN

SLIGHTLY IRRITATING. Contact may cause reddening and pain or burning sensation.

Defatting agent. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage. .

No significant effects are expected to occur following short term exposure. Repeated or prolonged contact with large amounts of this material may result in absorption through the skin to produce toxic effects.

#### POTENTIAL HEALTH EFFECTS, EYE

May cause slight transient irritation, lacrimation (tears) and a burning sensation in the eyes.

Exposure to vapors, fumes or mists may cause irritation.

Prolonged or repeated exposure may cause irritation and conjunctivitis.

#### POTENTIAL HEALTH EFFECTS, INHALATION

Breathing of the mists, vapors or fumes may irritate the nose, throat and lungs. Symptoms may include sore throat coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness,

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in-coordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. May cause cardiac sensitization, including arrhythmia (irregular heart beat) and death due to cardiac arrest. Overexposure to this material may cause systemic damage including target

organ effects listed under "Toxicological Information" (Section 11). Other specific symptoms of exposure are listed under "Toxicological information" (Section 11).

## POTENTIAL HEALTH EFFECTS, INGESTION

May cause irritation of the mouth, throat and gastrointestinal tract. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Aspiration into lungs may cause chemical pneumonia and lung damage. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation" (see Inhalation section).

Overexposure to this material may cause systemic damage including target organ effects listed under "Toxicological Information" (Section 11).

Other specific symptoms of exposure are listed under "Toxicological Information" (Section 11).

## SECTION 4 -----FIRST AID MEASURES-----

### SKIN

Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. -

Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Discard contaminated leather goods. '

### EYE

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

### INHALATION

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

### INGESTION

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

## NOTES TO PHYSICIAN

Gastric lavage may be indicated if ingested. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. In cases of acute poisoning, artificial respiration with administration of oxygen may be useful for support. DO NOT GIVE EPINEPHRINE, EPHEDRINE OR SIMILAR ADRENERGIC DRUGS. THEY MAY INDUCE FATAL VENTRICULAR FIBRILLATION. Electrocardiograph monitoring should be carried out with severely ill patients to anticipate possible cardiac arrest.

## SECTION 5 -----FIRE FIGHTING MEASURES AND EXPLOSION DATA-----

### HAZARDOUS COMBUSTION PRODUCTS

Combustion may produce hazardous combustion products such as COx and irritating vapors.

### EXTINGUISHING MEDIA

Use water spray, dry chemical, carbon dioxide or fire-fighting foam for Class B fires to extinguish fire.

### BASIC FIRE FIGHTING PROCEDURES

Evacuate area and fight fire from a safe distance.

If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire. Firefighters must wear NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

### UNUSUAL FIRE & EXPLOSION HAZARDS

Vapors may form explosive mixture with air. Vapors can travel to a source of ignition and flash back.

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Explosion hazard if exposed to extreme heat or to thermal shock.

**Flash Point** **Greater than 158°F or (70°C) TAG CLOSED CUP (ASTM D56)**

Auto ignition Temperature 720 - 835°F or (382 - 446°C)

Flammability Limits in Air, Lower, % by Volume Not disclosed or Not applicable

Flammability Limits in Air, Upper, % by Volume Not disclosed or Not applicable

## **SECTION 6 -----ACCIDENTAL SPILL OR LEAK PROCEDURES-----**

### **EMERGENCY ACTION**

Eliminate and/or shut off ignition sources and keep ignition sources out of the area. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. Isolate for 800 meters (1/2 mile) in all directions if tank, rail car or tank truck is involved in fire. Evacuate area endangered by release as required. (See Exposure Controls/Personal Protection, Section 8.)

### **ENVIRONMENTAL PRECAUTIONS**

Eliminate all sources of ignition. Isolate hazard area and deny entry. If material is released to the environment, take immediate steps to stop and contain release. Caution should be exercised regarding personnel safety and exposure to the released material. Notify local, provincial and/or federal authorities, if required.

### **SPILL OR LEAK PROCEDURE**

Keep unnecessary people away. Isolate area for at least 50 meters (150 feet) to preserve public safety. For large spills, consider initial evacuation for at least 300 meters (1000 feet). Keep ignition sources out of area and shut off all ignition sources. Absorb spill with inert material (e. g. dry sand or earth) then place in a chemical waste container. Large Spills: Dike far ahead of liquid spill for later disposal.

Use a vapor suppressing foam to reduce vapors. Stop leak when safe to do so.

See Exposure Controls/Personal Protection (Section 8).

## **SECTION 7 -----PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE-----**

### **HANDLING**

Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion.

Use non-sparking tools. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

Do not eat, drink or smoke in areas of use or storage.

### **STORAGE**

Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles.

Avoid contact with strong oxidizers.

Empty containers may contain material residue. Do not reuse without adequate precautions.

Do not eat, drink or smoke in areas of use or storage.

## **SECTION 8 -----EXPOSURE CONTROL / PERSONAL PROTECTION-----**

### **ENGINEERING CONTROLS**

General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures.

### **EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

Keep away *from* eyes. Eye contact can be avoided by using chemical safety glasses, goggles, and/or *face* shield.

Have eye-washing facilities readily available where eye contact can occur.

### **SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

Avoid skin contact with this material. Use appropriate chemical protective gloves when handling. Protective glove materials include, but are not limited to Viton, Silver Shield/4H (PE/EVAL/PE). Additional protective clothing may be necessary.

Good personal hygiene practices such as properly handling contaminated clothing, using wash facilities before entering public areas and restricting eating, drinking and smoking to designated areas are essential for preventing personal chemical contamination.

### **RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister, such as an organic vapor cartridge, may be used in circumstances where airborne concentrations may exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled /release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

## **SECTION 9 -----PHYSICAL AND CHEMICAL PROPERTIES-----**

### **ODOR AND APPEARANCE**

AMBER LIQUID WITH A HYDROCARBON ODOR

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|                     |   |
|---------------------|---|
| Boiling Point       | Greater than 212°F  |
| Flash Point         | <b>Greater than 158°F of (70°C) TAG CLOSED CUP (ASTM D56)</b> |
| Specific Gravity    | 0.78-0.88 at 24°C   |
| Melting Point       | Not disclosed or not applicable                               |
| Percent Volatile    | Not disclosed or not applicable                               |
| Vapor Pressure      | 0.5 psi   |
| Vapor Density       | Not disclosed or not applicable                               |
| Bulk Density        | Not disclosed or not applicable                               |
| Solubility in Water | Not disclosed or not applicable                               |
| Octanol/Water Partn | 3.30 - 4.50 @ 25°C  |
| Volatile Organic    | Not disclosed or not applicable                               |
| pH Value            | ESSENTIALLY NEUTRAL   |
| Freezing Point      | Not disclosed or not applicable                               |
| Evaporation Rate    | VERY SLOW   |
| Molecular Weight    | Not disclosed or not applicable                               |
| Chemical Family     | HYDROCARBON MIXTURE   |
| Odor Threshold      | Not disclosed or not applicable                               |

**SECTION 10 -----STABILITY AND REACTIVITY DATA-----**

**STABILITY/INCOMPATIBILITY**

Incompatible with oxidizing agents. See precautions under Handling & Storage (Section 7).

**HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS**

Combustion may produce COx and irritating vapors.

**SECTION 11 -----TOXICOLOGICAL INFORMATION-----**

**ROUTES OF EXPOSURE**

Inhalation, ingestion, skin and eye contact.

**LD50**

LD50: 6-7 g/kg (rat, oral)

LD50: >2 g/kg (rat, dermal)

**LC50**

LC50: >4688 mg/m<sup>3</sup> (rat, 4 hr) - maximum achievable saturated vapor concentration.

**TOXICOLOGICAL DATA**

Acute or chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: skin, liver, kidney, cardiovascular and nervous system. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as solvent or painter's syndrome). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal. This material contains benzene. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia.

**CARCINOGENICITY**

This material contains benzene. Benzene is carcinogenic to laboratory animals when given by intubation or by inhalation. There is an association between occupational exposure to benzene and human leukemia. Carcinogenic determinations: IARC human positive and animal suspected carcinogen (IARC Class 1); NTP known carcinogen; ACGIH suspected carcinogen; OSHA carcinogen.

**TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS**

This material contains benzene. Mutagenic and clastogenic in mammalian and non-mammalian test systems.

Reproductive or developmental toxicant only at doses that are maternally toxic, based on tests with animals.

Pregnant women may be at an increased risk from exposure. Consumption of alcoholic beverages may enhance toxic effects.

**PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE**

Pre-existing medical conditions which may be aggravated by exposure include disorders of the skin, liver, kidney, respiratory, cardiovascular and nervous system.

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## SECTION 12 -----ECOLOGICAL INFORMATION-----

### CHEMICAL FATE INFORMATION

Available data indicate similar materials (C6-C16 hydrocarbons) biodegrade in soil, readily degrade in the atmosphere, and may partition into air, soil and to a lesser extent, water.

Biodegradation in soil (OECD 301 F) = 60.7% in 28 days

Indirect Atmospheric Photo-degradation: T (half-life) = 3.7 to 29.2 hours

## SECTION 13 -----DISPOSAL PROCEDURES-----

### WASTE DISPOSAL

This material, as supplied, when discarded or disposed of, is a characteristic hazardous waste according to Federal regulations (Subpart C of 40 CFR 261) due to its benzene content. Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the material to determine, at the time of disposal, whether the material is a hazardous waste subject to RCRA. The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state and local regulations. In Canada, wastes should be disposed of according to federal, state, provincial and local regulations.

## SECTION 14 -----TRANSPORTATION INFORMATION-----

### BILL OF LADING - NON-BULK (U. S. DOT)

FLASH POINT: GREATER THAN 158°F (70°C) (TAG CLOSED CUP)

GROUND, AIR, OCEAN THIS MATERIAL IS **NOT REGULATED**, FOR TRANSPORTATION TO, THROUGH AND FROM THE UNITED STATES AS PER CFR 49, 173.150(f)

### BILL OF LADING-BULK (U. S. DOT)

Combustible Liquid, N.O.S., Solution, NA1993, PG III

#### U. S. Department of Transportation (DOT) Requirements

#### General Transportation Information for Bulk Shipments

|                      |   |
|----------------------|---|
| Proper Shipping Name | Combustible Liquid, N.O.S., Mixture     |
| Hazard Class         | Combustible Liquid UN/NA Code NA1993    |
| Packaging Group      | PG III                                  |
| Labels Required      | None                                    |
| Placards Required    | Combustible, NA1993                     |
| Reportable Quantity  | See Regulatory Information (Section 15) |

International Transportation HS CODE: 3811.19.0000 ANTI-KNOCK AGENT

IATA Not Regulated See DOT requirements

IMDG Not Regulated See DOT requirements

COMMENTS: See Bill of Lading for proper shipping description, or consult 49 CFR 100-185 for specific shipping information.

## SECTION 15 -----REGULATORY INFORMATION-----

### FEDERAL REGULATIONS

All ingredients are on the TSCA inventory, or are not required to be listed on the TSCA inventory.

This material may be subject to export notification under TSCA section 12(b); contains: Naphthalene, CAS# 91-20-3, Effective Date 5/26/04. Consult OSHA's Benzene standard 29 CFR 1910.1028 for provisions on air monitoring, employee training, medical monitoring, etc. A release of this material, as supplied, may be exempt from reporting under the Comprehensive Environmental

Response Compensation and Liability Act(CERCLA-40 CFR 302) by the petroleum exclusion. Releases may be reportable to the National Response Center (800-424-8802)under the Clean WaterAct,33 U.S.C. 1321(b)(3) and (5)

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This material does not contain toxic chemicals (in excess of the applicable de minimis concentration) that are subject to the annual toxic chemical release reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372).

This material contains one or more substances listed as hazardous air pollutants under Section 112 of the Clean Air Act. This material contains up to 100% volatile organic compounds (VOCs) per 40 CFR Part 51.100. This material contains less than 1% hazardous air pollutants (HAPs) per Section 112 Clean Air Act Amendments of 1990.

Check local, regional or state/provincial regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Failure to report may result in substantial civil and criminal penalties.

**STATE REGULATIONS**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**INTERNATIONAL REGULATIONS**

This material has been classified in accordance with the hazard criteria of the Hazardous Products Act and the Controlled Products Regulations (CPR) and this SDS contains all the information required by the CPR.

WHMIS Classification: B3, D2B

**INVENTORIES:**

EU INVENTORY (EINECS): 274-759-3

KOREA INVENTORY (ECL): KE-01915

US INVENTORY (TSCA): 70693-06-0

**SARA 311/312HAZARDCATEGORIES**

|                    |   |                 |   |              |   |                  |  |
|--------------------|---|-----------------|---|--------------|---|------------------|--|
| Immediate Hazard:  | X | Delayed Hazard: | X | Fire Hazard: | X | Pressure Hazard: |  |
| Reactivity Hazard: | - |                 |   |              |   |                  |  |

**NFPA RATINGS**

|        |   |              |   |            |   |                 |  |
|--------|---|--------------|---|------------|---|-----------------|--|
| Health | 1 | Flammability | 2 | Reactivity | 0 | Special Hazards |  |
|--------|---|--------------|---|------------|---|-----------------|--|

**HMIS RATINGS**

|        |    |              |   |            |   |
|--------|----|--------------|---|------------|---|
| Health | 1* | Flammability | 2 | Reactivity | 0 |
|--------|----|--------------|---|------------|---|

**WHMIS RATINGS**

|                     |   |                       |  |                        |                      |
|---------------------|---|-----------------------|--|------------------------|----------------------|
| Compressed Gas      |   | Flammable/Combustible |  | Oxidizer Acutely Toxic |                      |
| Other Toxic Effects | x | Bio Hazardous         |  | Corrosive              | Dangerously Reactive |

**SECTION 16 -----ADDITIONAL COMMENTS AND INFORMATION-----**

**PREPARED: JANUARY 2015 – REV. 900.01**

**DISCLAIMER**

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, an SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the material.