

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Firestone Non-Chlorinated Throttle Body & Air Intake Cleaner (aerosol)

Product Number (s): 48-11-765-1

Product Use: Fuel-Injection Air Intake Cleaner

Manufactured for:

BFS Retail & Commercial Operations, LLC
333 East Lake St
Bloomington, IL 60108

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Vapors May Cause Flash Fires. Harmful if Inhaled or Swallowed.
Eye and Skin Irritant. Contents Under Pressure.
As defined by OSHA's Hazard Communication Standard, this product is hazardous.
Appearance & Odor: Clear, colorless liquid; ketone odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: Moderate eye irritant. Exposure can cause irritation including stinging, tearing, redness, blurred vision, and swelling of the eyes.

SKIN: Moderate skin irritant. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of the skin. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects.

INHALATION: Breathing large amounts of this material may be harmful. Symptoms include irritation of the nose and throat and central nervous system depression (dizziness, drowsiness, weakness, headache, nausea, disorientation, unconsciousness).

INGESTION: Main hazard is aspiration. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage. Swallowing this material may also cause nausea and diarrhea. Acetone poisoning may result in liver and kidney damage.

CHRONIC EFFECTS: Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TARGET ORGANS: liver, kidneys, central nervous system

Medical Conditions Aggravated by Exposure: skin sensitivities, respiratory (asthma-like) disorders

See Section 11 for toxicology and carcinogenicity information on product ingredients.

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Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Acetone	67-64-1	75 - 85
Heptane isomers	142-82-5	4 - 8
Toluene	108-88-3	2 - 5
Diacetone alcohol	123-42-2	< 1
Carbon dioxide	124-38-9	5 - 15

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Seek medical attention. Do not induce vomiting unless instructed by medical personnel. Have victim drink a glass of water if conscious.

Note to Physicians: This material is an aspiration hazard. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents. The use of other drugs with less arrhythmogenic potential should be considered.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: < 0°F / < -18°C (TCC) Upper Explosive Limit: 12.8
Autoignition Temperature: 869°F / 465°C Lower Explosive Limit: 2.5

Fire and Explosion Data:

Suitable Extinguishing Media: Dry chemical, carbon dioxide, alcohol-resistant foam, Class B extinguishers

Products of Combustion: Oxides of carbon

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and rupture. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

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Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Eliminate sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near potential sources of ignition. Wash thoroughly after use and before handling food. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Aerosol cans must be maintained below 120 F to prevent cans from rupturing. Keep away from incompatible materials.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Acetone	1000	NE	500	750	NE		ppm
Heptane	500	NE	400	500	NE		ppm
Toluene	200	300 (c)	20	NE	NE		ppm
Diacetone alcohol	50	NE	50	NE	NE		ppm
Carbon dioxide	5000	30000(v)	5000	30000	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

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Skin Protection: Use protective gloves such as nitrile, PVA, or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid

Color: clear, colorless

Odor: ketone

Odor Threshold: ND

Specific Gravity: 0.785

Initial Boiling Point: 132° / 56°C

Freezing Point: < -100°F / -73°C

Vapor Pressure: ND

Vapor Density: 2 (air = 1)

Evaporation Rate: fast

Solubility: slightly soluble in water

Coefficient of water/oil distribution: ND

pH: NA

Volatile Organic Compounds: wt %: 9.1 g/L: 71.4 lbs./gal: 0.6

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition; temperature extremes

Incompatible Materials: Avoid contact with alkalis, reducing agents, acids and oxidizers such as chlorine and other halogens, chromates, perchlorates, peroxides and oxygen.

Hazardous Decomposition Products: Oxides of carbon, various hydrocarbons

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Acetone	5800 mg/kg	No data	50,100 mg/m ³ /8H
Heptane	No data	No data	103 g/m ³ /4H
Toluene	636 mg/kg	14,100 µL/kg	49 g/m ³ /4H
Diacetone alcohol	2520 mg/kg	13,500 mg/kg	No data
Carbon dioxide	No data	No data	470,000 ppm/30M

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Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Acetone	No	No	No	E & S (moderate) / R (mild)	Yes
Heptane	No	No	No	E & R (mild) / S (moderate)	Unknown
Toluene	No	No	No	E, S & R (mild)	Unknown
Diacetone alcohol	No	No	No	E (moderate) / R (mild)	Unknown
Carbon dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Acetone – 48H LC50 Daphnia: 10 mg/l
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with the following potential waste code(s) D001. Pressurized containers may be a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33)
Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D
ICAO/IATA (air): Consumer Commodity, ID8000, 9
IMO/IMDG (water): Aerosols, UN1950, 2.1, Limited Quantity
Special Provisions: None

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Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Acetone (5000 lbs), Toluene (1000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the 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:
Toluene (2.5%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): Toluene

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Toluene

Consumer Products VOC Regulations: In states with consumer products VOC regulations, this product is compliant as a Fuel-Injection Air Intake Cleaner.

State Right to Know:

New Jersey: 67-64-1, 108-88-3, 142-82-5, 124-38-9, 123-42-2
Pennsylvania: 67-64-1, 108-88-3, 142-82-5, 124-38-9, 123-42-2
Massachusetts: 67-64-1, 108-88-3, 142-82-5, 124-38-9, 123-42-2
Rhode Island : 67-64-1, 108-88-3, 142-82-5, 124-38-9, 123-42-2

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

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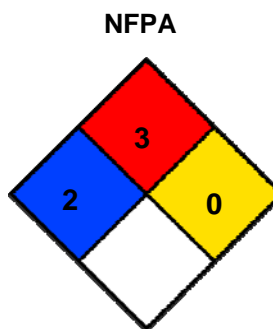
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Revision Date: 09/10/2010

Changes since last revision: Formula change to reduce VOC content

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of our knowledge or obtained from sources believed to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, or a health & safety professional.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System