

MATERIAL SAFETY DATA SHEET

PENRAY F.I. AIR INTAKE CLEANER

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: PENRAY F.I. AIR INTAKE CLEANER
Product Number: 2412C
Product Use: Fuel injector intake cleaner.
Manufacturer/Supplier: The Penray Companies, Inc.
440 Denniston Ct.
Wheeling, IL 60090
Phone Number: 847-459-5000
Emergency Phone: Adverse Medical: 1-800-752-7869
CHEMTREC 1-800-424-9300
CHEMTREC International 703-527-3887 (collect)
CANUTEC (Canada only) 613-996-666, or *666 on cellular phone
Date of Preparation: May 28, 2014

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

EXTREMELY FLAMMABLE. HARMFUL BY INHALATION. IRRITATING TO EYES. IRRITATING TO SKIN. CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED. HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED. MAY CAUSE TERATOGENICITY AND EMBRYOTOXICITY. MAY CAUSE CANCER.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Irritating to eyes.

Skin: Irritating to skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Contains ingredients known or suspected to be carcinogenic, teratogenic and/or embryotoxic.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Vapours may cause drowsiness, dizziness, and CNS depression.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

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Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Acetone	67-64-1	40 - 70
Propane	74-98-6	7 - 13
Toluene	108-88-3	7 - 13
n-Butane	106-97-8	7 - 13
Ethylene glycol monobutyl ether	111-76-2	7 - 13
Xylene	1330-20-7	3 - 7
Ethylbenzene	100-41-4	1 - 5

Section 4: FIRST AID MEASURES

- Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if you feel unwell.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention or call poison control immediately.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

- Flammability:** Flammable by WHMIS criteria.
- Means of Extinction:**
- Suitable Extinguishing Media:** Powder, water spray, foam, carbon dioxide.
 - Unsuitable Extinguishing Media:** Do not use a direct water stream.
- Products of Combustion:** May include, and are not limited to: oxides of carbon.
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not available.
 - Sensitivity to Static Discharge:** Not available.
- Protection of Firefighters:** Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Use water spray to keep fire-exposed containers cool.

Section 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

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Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:

Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/mist/vapour/spray. Use only in well-ventilated areas. Handle container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:

Keep locked up and out of reach of children. Keep container in a well-ventilated place. Do not store at temperatures above 49 °C / 120 °F. Store away from direct sunlight or other heat sources.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits ACGIH-TLV
Acetone	500 ppm
Propane	1000 ppm
Toluene	20 ppm
n-Butane	Not available.
Ethylene glycol monobutyl ether	20 ppm
Xylene	100 ppm
Ethylbenzene	20 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear.
Colour:	Colourless.
Odour:	Solvent.
Odour Threshold:	Not available.

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Physical State:	Gas/Pressurized Liquid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	0.872 - 0.877
Solubility in Water:	Not available.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials. Sources of ignition.

Incompatible Materials: Acids. Amines. Bases. Oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD₅₀ (oral)	LC₅₀
Acetone	5800 mg/kg, rat	50100 mg/m ³ 8hr, rat
Propane	Not available.	658 mg/L 4hr, rat
Toluene	> 5000 mg/kg, rat	28.1 mg/L 4hr, rat
n-Butane	Not available.	658 g/m ³ 4hr, rat
Ethylene glycol monobutyl ether	470 mg/kg, rat	450 ppm 4hr, rat 5000 ppm 4hr, rat;
Xylene	4300 mg/kg, rat	47635 mg/L 4hr, rat
Ethylbenzene	3500 mg/kg, rat	17.2 mg/L 4hr, rat

Eye: Irritating to eyes. Symptoms may include discomfort or pain, excess blinking and tear production.

Skin: Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

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Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness, dizziness, and CNS depression.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS criteria.

Carcinogenicity: Hazardous by WHMIS criteria.

Ingredient

Chemical Listed as Carcinogen or Potential Carcinogen *

Acetone	G-A4
Propane	Not listed.
Toluene	G-A4, I-3
n-Butane	Not listed.
Ethylene glycol monobutyl ether	G-A3, I-3
Xylene	G-A4, I-3
Ethylbenzene	G-A3, I-2B

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS criteria.

Reproductive Effects: Not hazardous by WHMIS criteria.

Developmental Effects:

- Teratogenicity:** Hazardous by WHMIS criteria.
- Embryotoxicity:** Hazardous by WHMIS criteria.

Respiratory Sensitization: Not hazardous by WHMIS criteria.

Skin Sensitization: Not hazardous by WHMIS criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations. Empty containers may retain flammable residual vapours.

Section 14: TRANSPORTATION INFORMATION

TDG Classification

UN1950, Aerosols, Flammable, Class 2.1
Limited Quantity (\leq 1L)

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Section 15: REGULATORY INFORMATION

Federal Regulations

Canada: 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.

Global Inventories

Ingredient	Canada DSL/NDSL
Acetone	DSL
Propane	DSL
Toluene	DSL
n-Butane	DSL
Ethylene glycol monobutyl ether	DSL
Xylene	DSL
Ethylbenzene	DSL

HMIS - Hazardous Materials Identification System

Health - 2* Flammability - 4 Physical Hazard - 0 PPE – B

NFPA - National Fire Protection Association:

Health - 2 Fire - 4 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

- Class A - Compressed Gas
- Class B5 - Flammable Aerosol
- Class D2A - Carcinogenicity
- Class D2A - Teratogenicity and Embryotoxicity
- Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

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Section 16: OTHER INFORMATION

Disclaimer:

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. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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