



SAFETY DATA SHEET

Penetone® Corporation, 700 Gotham Parkway, Carlstadt, NJ 07072
CAGE 56883

PENAIR® M5704A

MIL-PRF-85704C Type I
NSN 6850-01-7594/7597 (5/55 gal)

Page: 1 of 8
Date Prepared: March 15, 2015
MSDS No.: 4141

SECTION 1: IDENTIFICATION

Product name: PENAIR M5704A

Recommended use: Gas turbine compressor cleaning

Physical Description: Clear amber liquid with mild solvent odor

Generic Ingredients: Aromatic hydrocarbons, surfactants, water, and glycol/glycol ether

Manufacturer:

Penetone Corporation
700 Gotham Parkway
Carlstadt, NJ 07072
800-631-1652 or 201-567-3000

Business Contact:

Customer Service
800-631-1652 x2602 or 2272
Product Safety
800-631-1652 x2211 or 2257

Emergency Phone Numbers: PENETONE 201-567-3000 CHEMTREC 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

<p>Health: Skin irritation: 2 Eye irritation: 2A Specific target organ toxicity - single exposure: 2 Specific target organ toxicity - single exposure: 3</p>	<p>Specific target organ toxicity - repeated exposure: 2 Carcinogenicity: 2 Aspiration hazard: 1 Physical: Flammable liquid: 4</p>
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DANGER!

May Be Fatal If Swallowed and Enters Airways.
Causes Skin and Serious Eye Irritation.
May Cause Drowsiness or Dizziness.
May Cause Damage to Organs (Central Nervous System, Kidneys, and Liver) If Swallowed.
Suspected of Causing Cancer.
Combustible Liquid.



Precautionary Statements:	
<p><u>Prevention:</u> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fumes, vapors or mists if inhalable mists occur during use. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection. Do not eat, drink or smoke when using this product. Wash hands and exposed skin thoroughly after handling.</p> <p><u>Response:</u> <i>If in eyes:</i> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. <i>If on skin (or hair):</i> Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used. Wash</p>	<p>contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. <i>If inhaled:</i> Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, emergency room or 911 if you feel unwell. <i>If swallowed:</i> Immediately call a poison center, doctor, emergency room, or 911. Do NOT induce vomiting. <i>If exposed or concerned:</i> Call a poison center, doctor, or emergency room.</p> <p><u>Storage:</u> Store locked up. Store in a well-ventilated place. Keep container tightly closed.</p> <p><u>Disposal:</u> Dispose of contents/container in accordance with local, regional, and national regulations (see Sections 13 and 15 of SDS for disposal and reporting requirements).</p>



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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Concentration Wt% (1)
Aromatic petroleum naphtha	64742-94-5	45-65
Water	7732-18-5	10-25
Ethoxylated nonylphenol	127087-87-0	1-10
Coco diethanolamide	68603-42-9	1-10
1-Butoxyethanol	111-76-2	1-10
Diethylene glycol	111-46-6	1-10
Polyoxyethylene-polyoxypropylene block copolymer	9003-11-6	1-10

(1) Exact percentages being withheld under trade secret provision of OSHA HCS 1910.1200(i)

SECTION 4: FIRST-AID MEASURES

General Description of Symptoms & First-Aid Measures

Most likely work-place exposure routes will be *skin contact* or *inhalation*.

For *skin contact*, typically no immediate effects will be observed. Slight reddening or minor irritation could develop some time after exposure if product is not quickly washed off. For sensitive individuals, a rash may appear.

Inhalation exposure may produce varied effects, particularly if exposure occurs above the recommended workplace exposure limits (see SECTION 8). Typical symptoms would include headaches, dizziness, and drowsiness. In extreme cases, unconsciousness and other central nervous effects may occur.

Eyes

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists or develops: Get medical advice or attention. Penetone recommends that after any eye exposure a physician be seen immediately.

Ingestion

If swallowed: Immediately call a poison center, doctor, physician or other competent medical authority. Rinse mouth. Product presents an aspiration hazard. DO NOT INDUCE VOMITING.

Inhalation

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

Skin

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used to wash skin. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice or attention.

Special Treatment / Other

None

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties

Classification: 4

Flash Point: 145°F TCC, 180°F COC

Autoignition Temperature: not determined



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Lower Flammable Limit: not determined **Upper Flammable Limit:** not determined

Specific Hazards

Combustible liquid. Can form combustible mixtures at or above the flash point. Although the product is combustible, it is water based and water dilutable and will self extinguish with addition of water.

Extinguishing Media

Suitable: SMALL FIRE: Use dry chemical, carbon dioxide (CO₂), water spray or regular foam. LARGE FIRE: water spray, water fog, or foam.

Unsuitable: Do not use solid water stream as this may spread fire.

Protection & Precautions for Firefighters

Protective Equipment & Clothing: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Fire Fighting Guidance: Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.

Hazardous Combustion Products: Smoke, fumes, and oxides of carbon and nitrogen.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Land Spill

Eliminate sources of ignition. Do not touch or walk through spilled material. Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal.

Water Spill

Product forms emulsion with water which may make cleanup difficult. Avoid agitation to minimize emulsion formation. Remove product from water surface by skimming or with suitable absorbents. Put into properly labeled containers for reclamation or disposal. If allowed by local environmental regulatory agencies, you may use a suitable dispersant. Check with local environmental regulatory agencies for reporting requirements.

See SECTION 8 for EXPOSURE CONTROLS and PERSONAL PROTECTION.

SECTION 7: HANDLING & STORAGE

Handling

Do not handle near heat, sparks, or flame. Avoid contact with oxidizing agents. Use only with adequate ventilation/personal protection (SEE section 8). Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Dispose of empty containers with care. Empty containers can contain flammable residue and explosive vapors. **Do not cut, weld, or reuse empty container.**

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Do not store near heat, sparks, open flame, or other ignition sources. Do not store near strong oxidizing agents. Do not store in direct sunlight. Avoid storing above 120°F (49°C).

SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION



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Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal Protection

Inhalation A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of an organic vapor mask or respirator is recommended.

Skin Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

Eyes Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

Occupational Exposure Limits

Component Name	Source	Value	Type	Notation
Aromatic petroleum naphtha	ACGIH	100 mg/m ³	TWA	Appendix H
	NIOSH	350 mg/m ³	TWA	
		1800 mg/m ³	Ceiling	
1-Butoxyethanol	OSHA Z1	500 ppm	TWA	
	ACGIH	20 ppm	TWA	A3; BEI
	NIOSH	5 ppm	TWA	skin
	OSHA	50 ppm	TWA	skin

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

Appearance: clear amber liquid

Odor: mild solvent

Odor Threshold: not determined

pH: about 9

Melting Point / Freezing: about 30°F

Boiling Point / Boiling Point Range: about 212°F

Flash Point: 145°F TCC, 180°F COC

Evaporation Rate: equal to water

Flammability: not applicable

Lower Flammable Limit: not determined

Upper Flammable Limit: not determined

Explosive Properties: not applicable

Vapor Pressure: equal to water

Relative Vapor Density: not determined

Relative Density: 0.95

Solubility (Water): forms emulsion (separate in one to 12 hours)

Partition Coefficient (K_{ow}): not determined

Auto-ignition temperature: not determined



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Decomposition temperature: not determined

Viscosity: 15-22 centistokes at 80°F

SECTION 10: STABILITY & REACTIVITY

Reactivity

Product is stable and only reactive under extreme conditions (very high heat/pressure) or in the presence of specific incompatible materials (see below).

Chemical Stability

Product is stable.

Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Combustible liquid. Do not store near sources of heat, sparks, open flame, or other ignition sources.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide and dioxide and nitrogen oxides when taken to dryness and burned.

SECTION 11: TOXICOLOGICAL INFORMATION

Product Summary

Product is irritating to the skin and eyes. Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, and may cause headaches, dizziness, drowsiness, unconsciousness and other central nervous system effects.

Acute Toxicity:

Dermal: Rabbits, LD50 > 2,000 mg/kg (estimated using additivity formula)

Inhalation: no data available

Oral: Rats, LD50 > 2,000 mg/kg (estimated using additivity formula)

Skin Corrosion/Irritation

Based upon component information, product is expected to be mildly irritating to the skin.

Serious Eye Damage/Irritation

Based upon component data, product is expected to cause moderate to serious eye irritation.

Sensitization - Respiratory or Skin

Based upon component data, not expected to be a skin sensitizer.

Germ Cell Mutagenicity

No data available. Based upon component data, product not expected to exhibit germ cell mutagenicity.

Carcinogenicity

1-Butoxyethanol is listed by ACGIH as Group A3: confirmed animal carcinogen with unknown relevance to humans

Cocodiethanolamide is listed by IARC as Group 2B: Possibly carcinogenic to humans.

Reproductive Toxicity



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No data available.

The nonionic surfactant used in this product has produced effects in the fetus only at levels that were toxic to the parent animals.

1-Butoxyethanol has been toxic to the fetus lab animals at doses toxic to the mother. Effects on reproduction have been seen only at doses that produced significant toxicity to the parent animal.

Diethylene glycol was found to be a reproductive and developmental toxicant when administered at high doses to lab animals.

Specific Target Organ Effects - Single Exposure

No data available.

Ingestion of diethylene glycol has caused damage to the lungs, brain, pancreas and adrenal glands of lab animals. Metabolic acidosis, hyperkalemia, elevated blood creatine and urea levels, and hypoglycemia were observed. May cause central nervous system depression, gastrointestinal tract, liver, and kidney damage.

Specific Target Organ Effects - Repeated or Prolonged Exposure

No data available.

The aromatic hydrocarbon caused kidney effects in male rats which are not considered relevant to humans.

Repeated exposure to 1-butoxyethanol has caused hemolysis and secondary effects on the kidney and liver in lab animals. Small but statistically significant increases in tumors were observed in mice but not rats. These effects are not believed to be relevant to humans.

Repeated exposure to diethylene glycol may cause damage to the central nervous system, kidneys, and liver.

Aspiration Hazard

Based upon available data and comparison to similar materials, if swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

SECTION 12: ECOLOGICAL INFORMATION

Product Summary

Product is expected to be toxic to fish, aquatic invertebrates, algae, and microorganisms. (Acute aquatic toxicity category 2 by European Union classification).

Ecotoxicity

LC/EC/IC 1-10 mg/l (estimated using additivity formula)

Persistence and Degradability

Based upon component data, product is expected to be inherently biodegradable.

Bioaccumulative Potential

No data available for the product. Aromatic solvent used in this product has the potential to bioaccumulate.

Mobility in soil

No data available for the product. Product is a complex mixture. Components will partition into water and soil phases depending on inherent solubility of component in water.

Other Adverse Effects

None known



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SECTION 13: DISPOSAL CONSIDERATIONS

Nonhazardous waste. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

Note: Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

SECTION 14: TRANSPORT INFORMATION

ID No.: None
Proper Shipping Name: Nonhazardous (nonregulated) material
Hazard Class: None
Packing Group: None
Label: None
Marine Pollutant: No
RQ: No
Special Precautions: None

SECTION 15: REGULATORY INFORMATION

TSCA
The ingredients in this product are listed on the TSCA inventory.

RCRA HAZARD CLASS
Nonhazardous waste

SARA 311/312 REPORTABLE HAZARD CATEGORIES: Immediate (Acute) Health

REPORTING REQUIREMENTS (all quantities in pounds)

Component	CAS / 313 Code	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ	Section 313	CAA 112(r) TQ	CWA / OPA
1-Butoxyethanol	N230 Glycol ethers			(1)			
Diethylene glycol	N230 Glycol ethers			(1)			
(1) CERCLA hazardous substance with no assigned RQ							

NEW JERSEY RIGHT-TO-KNOW INFORMATION

This product contains aromatic petroleum naphtha (CAS 64742-94-5), water (CAS# 7732-18-5), ethoxylated nonylphenol (CAS 127087-87-0), coco diethanolamide (CAS 68603-42-9), 1-butoxyethanol (CAS 111-76-2), and diethylene glycol (CAS 111-46-6).

CALIFORNIA PROPOSITION 65 INFORMATION

This product contains a chemical recognized by the state of California to cause cancer: coco diethanolamide (CAS# 68603-42-9).

SCAQMD INFORMATION

Is there a photochemically reactive material present? Yes
What is the % by volume of photochemically reactive material? 58
What is the VOC content? 650 g/l



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What is the vapor pressure of VOC's? approximately 1 mm Hg @ 20°C

SECTION 16: OTHER INFORMATION

REVISION SUMMARY

New GHS format

SUPERSEDES ISSUE DATE

February 24, 2004

HAZARD RATING SYSTEMS:

	<u>HMIS</u>	<u>NFPA</u>
HEALTH	1	1
FLAMMABILITY	2	2
REACTIVITY	0	0
	B	

KEY
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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