



Material Safety Data Sheet

#M-24115

SECTION I - General Information

Product Name: CPAC Imaging NDT Industrial Developer Concentrate
Catalog No. 24115

Chemical Family:
Photographic Developer

Formula:
Aqueous Mixture

Transportation Information:

Regulated by U.S. Department of Transportation? Yes
Proper Shipping Name: Acetic Acid Solution
U.N. Identification Number: UN2790
Hazard Class: 8
Packing Group: II
Exceptions: Limited Quantity

Manufacturer:
ALLIED Diagnostic Imaging Resources, Inc.
5440 Oakbrook Parkway
Norcross, GA 30093

Manufacturer's Phone Number:
(770) 448-0250

CHEMTREC Phone Number:
(800) 424-9300

SECTION II - Product and Hazardous Ingredients Information

<u>Item #1506 (Part A)</u>	<u>CAS#</u>	<u>PERCENT</u>	<u>EXPOSURE</u>	<u>SARA</u>
			<u>LIMITS</u>	<u>RQ/TPQ</u>
			<u>PEL or TLV</u>	
Potassium Sulfite	10117-38-1	15-20	NA	N/A / N/A
Hydroquinone	123-31-9	5-10	2mg/m3	1#-500#
Sodium Tetraborate	1330-43-4	1-5	2mg/m3	N/A / N/A
			(STEL 6mg/ m3)	
Sodium Bromide	7647-15-6	1-5	N/A	N/A / NA
N-hydroxyethyl ethylene-				
diamine trisodium salt	139-89-9	1-5	N/A	N/A / N/A
Water	7732-18-5	60-65	N/A	N/A / N/A

Nitrotriacetic acid (a minor component in this product, less than 0.1%) and its sodium salt have been shown under certain conditions to induce tumors in the urinary tracts of rats and mice. NTP and IARC carcinogen. Nitrotriacetic acid causes cancer in laboratory animals and therefore may present a carcinogenic risk to humans.

<u>Item #1606 (Part B)</u>					
Acetic Acid	64-19-7	55-60	10 ppm (STEL 15 ppm)	5000#	N/A
Diethylene Glycol	111-46-6	40-45			
1-Phenyl-3-Pyrazolidone	92-43-3	1-5	N/A	N/A	N/A

<u>Item #1706 (Part C)</u>					
Glutaraldehyde	111-30-8	40-45	0.2 ppm (ceiling)	N/A	N/A
Water	7732-18-5	55-60	N/A	N/A	N/A

SECTION III - Physical Data

Boiling Point: >212° F.-Part A&C; Part B-N/A

Specific Gravity: Part A-1.31, Part B- 1.09; Part C-1.11



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Vapor Pressure (mmHg): Part A&C-17.0; Part B-15.0

Vapor Density (mmHg): Part A&C-0.6; Part B-1.83

pH: Part A-11.3; Part B-1.2; Part C-approx. 3.0

Solubility in Water: Complete

Evaporation Rate: N/A

Appearance and Odor: Part A-Clear-off white, odorless;

Part B-Amber color, vinegar odor; Part C-Clear, aldehyde odor

SECTION IV - Fire and Explosion Hazard Data

Parts A & C

Flash Point: None

Extinguishing Media: Use method appropriate for surrounding fire.

Special Fire Fighting Procedures: Use protective clothing to prevent contact with skin and eyes.

Unusual Fire and Explosions Hazards: When heated to decomposition, it can emit toxic fumes of SO₂.

Part B

Flash Point: >225°F

Extinguishing Media: Water spray, alcohol foam, dry chemical, carbon dioxide.

Special Fire Fighting Procedures: Use protective clothing to prevent contact with skin and eyes. Use self-contained breathing apparatus.

Unusual Fire and Explosions Hazards: When heated to decomposition, it can emit toxic fumes. Will produce CO₂, and possible CO. Reacts vigorously with oxidizing materials.

SECTION V - Health Hazard Data

Effects of Overexposure: (Part A)

Hazard Overview: Harmful if inhaled, swallowed or absorbed through the skin. Eye, skin, and respiratory tract irritant. Prolonged or repeated skin contact may result in irritation or rashes. Exposures to small amounts of sulfites have been reported to cause hypersensitivity reactions in certain susceptible individuals, especially asthmatics. Ingestion may cause nausea or vomiting. Long-term exposure to large doses may cause kidney damage, CNS effects, or reproductive harm or birth defects based on animal data.

Pure Component Toxicology Information

Hydroquinone: Moderately toxic by oral ingestion. It is a skin and eye irritant and may cause an allergic reaction in sensitive individuals. Hydroquinone also may cause brown staining of the conjunctiva following prolonged direct eye contact with the solid and may depigment the skin following repeated skin contact under some circumstances. Sensitizer. Can cause cornea to cloud. Can cause methemoglobinemia. Hydroquinone is a CNS stimulant based on animal studies. Although hydroquinone is not listed as a human carcinogen, it has caused cancer in some animal studies.

Potassium Sulfite: Slightly toxic by oral ingestion. It is a slight to moderate skin, eye, and respiratory tract irritant. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, hives, weakness and diarrhea following ingestion.

Sodium Tetraborate: Ingestion or absorption through large areas of damaged skin may cause nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling. Mild irritation to nose and throat may occur when inhaled above PEL or TLV. Sodium tetraborate presents little or no hazard (to humans) and has low acute oral and dermal toxicities. May be harmful if swallowed. May cause reproductive harm or birth defects based on animal data.

Sodium Bromide: Inhalation of dust may cause irritation to the respiratory tract; symptoms may include coughing and shortness of breath. Ingestion may cause nausea, vomiting and abdominal pain. Ingestions are usually promptly rejected by vomiting, but sufficient absorption may occur to produce central nervous system, eye and brain effects. Symptoms may include skin rash, blurred vision and other eye effects, drowsiness, irritability, dizziness, mania, hallucinations, and coma. Eye contact may cause irritation, redness, and pain. Repeated ingestion of small amounts

may cause CNS depression. Aggravation of pre-existing conditions: persons suffering from debilitation, depression, alcoholism, neurological or psychological disorders may be more susceptible to the effects of this compound.



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N-Hydroxyethyl ethylenediamine trisodium salt: Can cause severe skin irritation. Swallowing may be harmful or fatal.
Cancer: Nitilotriacetic acid (a minor component in product, 1%) and its sodium salt have been shown under certain conditions to induce tumors in the urinary tracts of rats and mice. NTP and IARC carcinogen. This material causes cancer in laboratory animals and therefore may present a carcinogenic risk to humans.

Effects of Overexposure: (Part B)

Inhalation: Vapor may cause severe irritation to nose and throat. May cause difficulty breathing.

Eyes: Vapor may cause irritation. Contact causes severe burns.

Skin: Repeated and prolonged contact may cause irritation and burns.

Ingestion: Do **Not** take internally. May cause severe burns to upper respiratory tract. Do **Not** induce vomiting. Drink water to dilute.

Pure Component Toxicology Information

Acetic Acid: Acetic acid is a skin and eye corrosive. Vapor irritates the eyes and respiratory system. Ingestion causes internal irritation and damage. The compound has been infrequently associated with skin sensitization in humans.

1-Phenyl-3-Pyrazolidone: This compound is an eye irritant. Ingestion of large doses may cause red blood cell destruction and anemia, and liver, kidney, spleen or testicular abnormalities. May cause adverse reproductive effects – such as infertility or birth defects based on animal data.

Diethylene Glycol: May cause irritation by all routes of exposure. Inhalation or ingestion may cause gastrointestinal distress, symptoms of central nervous depression, kidney and liver damage, or death. May cause adverse reproductive effects and birth defects based on laboratory animal data.

Effects of Overexposure: (Part C)

Inhalation: Vapor may cause severe irritation to nose and throat. May cause difficulty breathing.

Eyes: Vapor may cause irritation. Contact may cause irritation and burns.

Skin: Repeated and prolonged contact may cause irritation and burns.

Ingestion: Do **Not** take internally. May cause severe burns to upper respiratory tract. Do **Not** induce vomiting. Drink water to dilute.

Pure Component Toxicology Information

Glutaraldehyde: Acute effects of overexposure: Eye and skin contact with glutaraldehyde causes severe irritation; burns and permanent injury may result. Prolonged or repeated skin contact with glutaraldehyde may result in dermatitis.

Inhalation of vapors or mists causes irritation of the respiratory tract and inflammation of the lungs may result.

Ingestion may cause moderate to severe gastric irritation. If ingested, may cause burns to upper digestive tract.

Ulceration or perforation of the gastrointestinal tract may occur. Glutaraldehyde is a strong irritant to the skin, eyes and respiratory tract. Repeated dermal contact may produce sensitization. Allergic dermatitis has been known to occur in humans. Chronic effects of overexposure: Overexposures have been known to produce liver damage in animal studies.

Medical Conditions Aggravated by Exposure: Persons with preexisting eye, skin or respiratory tract disorders may be more susceptible to the effects of this product.

Carcinogenicity Information: None of the components present in this material at concentrations equal to or greater than 0.1 % are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Evidence of:

Carcinogen: Hydroquinone, Nitilotriacetic acid

Teratogenicity: N/A

Reproductive Toxicity: 1-Phenyl-3-Pyrazolidone

Mutagenicity: Hydroquinone

Synergistic Products: N/A



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Emergency First Aid Procedures:

Skin: Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.

Eyes: Immediately flush with water, lifting upper and lower lids occasionally, get medical attention.

Ingestion: **For Part A ONLY** - Immediately drink two glasses of water to dilute concentration. Induce vomiting only as directed by medical personnel.
For Part B & Part C- Do **NOT** induce vomiting. Drink water to dilute concentration. **Get medical attention immediately. Never give anything by mouth to an unconscious person.**

Inhalation: Move to fresh air.

Primary route(s) of entry: Skin contact/absorption, inhalation, ingestion.

SECTION VI - Reactivity Data

Stability: Stable.

Incompatibility: Strong acids, strong bases.

Hazardous Decomposition Products: When heated to decomposition, it can emit toxic fumes. Will produce CO₂, and possibly CO, SO₂.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Keep away from heat or flame. Keep away from alkalis, amines, alcohols, and strong oxidizers.

SECTION VII - Spill or Leak Procedures

Steps to be Taken in Case Material is Released or Spilled: Wear protective clothing as specified in Section VIII. Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contaminated product and materials used in cleaning up the spill in a manner approved for this material. Consult proper federal, state and/or local regulatory agencies to ascertain proper disposal procedures.

SECTION VIII -Special Protection Information:

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limits.

Respiratory Protection (Specify Type): Part A & Working Solution: None should be needed under normal use conditions and good ventilation. Part B: If engineering controls do not maintain airborne concentrations below exposure limits, an approved respirator must be worn. Respirator Type: Organic vapor, acid gas. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134. Part C: If engineering controls do not maintain airborne concentrations below exposure limits, an approved respirator must be worn. Respirator Type: Organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Other Protective Equipment:

Gloves: Wear impervious gloves, apron to prevent skin contact.

Eyes: Wear protective goggles to prevent eye contact.

Other: Wear protective equipment/clothing necessary to prevent skin contact. Eyewash facilities in vicinity of use.

SECTION IX -Special Precautions

Precautions to be Taken in Handling and Storage: Do not store or consume food, drink or tobacco in surrounding area. Do not store near strong acids or bases. Wash thoroughly after use.

The information contained in this material safety data sheet is furnished without warranty of any kind. The user should consider this data a supplement to other information gathered and must make independent determination of suitability and completeness of information from this and other sources to assure proper use and disposal of the materials and the health and safety of employees and customers. This statement is incorporated as part of this Material Safety Data Sheet.



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Effective: May 2, 2007