

Revision Date: 2016-06-01 14
Reason for Revision: Reviewed Only

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: Mi590A-021 Peroxide Reagent A (test vial)

Application: Determination of Peroxides in Edible Oil

Company Information (USA):

Milwaukee Instruments, Inc.
2950 Business Park Drive, Rocky Mount, North Carolina, USA 27804

Technical Service Contact Information:

1-877-283-7837 (8:30AM ET – 5:00PM ET) (1-252-443-3630 (8:30AM ET – 5:00PM ET)

USA Emergency Contact Information: 1-800-424-9300 (Chemtrec 24Hr. Emergency)

E-mail Address: support@milwaukeeinstruments.com

SECTION 2: HAZARD IDENTIFICATION

Flammable. Harmful if swallowed. Causes burns. Irritating to skin. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	Chloroform	Acetic Acid
EC-No.:	200-663-8	200-580-7
CAS-No.:	67-66-3	64-19-7
Hazard:	Xn, Xi, Carc. Cat. 3	C
Phrases:	R: 22-38-40-48/20/22	R: 10-35
Content:	> 20% - < 50%	> 25% - < 90%

SECTION 4: FIRST AID MEASURES

After Inhalation:	Remove to fresh air. Call in physician. If breathing stops: mouth-to-mouth respiration or mechanical ventilation. Oxygen mask if necessary! Immediately call in physician.
After Skin Contact:	Wash affected area with plenty of water. Immediately remove contaminated clothing.
After Eye Contact:	Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in ophthalmologist.
After Swallowing:	Caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible Immediately call in physician. Do not attempt to neutralize.
General Information:	Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water, Carbon Dioxide, Foam, Powder

Special Risks:

Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Hydrochloric Acid, Acetic Acid Vapors. Vapors heavier than air. Forms explosive mixtures with air at ambient temperatures.

Special Protective Equipment:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Additional Information:

Prevent fire-fighting water from entering surface water or groundwater.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Do not inhale vapors/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms. Work under hood.

Environmental Precautions:

Do not allow to enter the sewerage system.

Additional Notes:

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation. Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate.

SECTION 7: HANDLING AND STORAGE

Handling:

Notes for prevention of fire and explosion: Keep away from sources of ignition. Take measures to prevent electrostatic charging. Notes for safe handling: Work under hood. Do not inhale substance. Avoid generation of vapors/aerosols.

Storage:

Tightly closed in a well-ventilated place, away from sources of ignition and heat. At +15°C to +25°C.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
Acetic Acid					
TWA (8hr)	25 mg/m ³	Belgium	TWA (8hr)	25 mg/m ³	Canada (Ontario)
TWA (8hr)	25 mg/m ³	Canada (Quebec)	TWA (15min)	25 mg/m ³	France
TWA (8hr)	25 mg/m ³	Germany	TWA (8hr)	25 mg/m ³	Greece
TWA (8hr)	25 mg/m ³	Hungary	TWA (8hr)	15 mg/m ³	Poland
TWA (8hr)	10 ppm	Portugal	TWA (8hr)	25 mg/m ³	Romania
TWA (8hr)	25 mg/m ³	Spain	TWA (8hr)	25 mg/m ³	UK
TWA (8hr)	10 ppm	USA (ACGIH)	TWA (8hr)	10 ppm	USA (OSHA)
Chloroform					
TWA (8hr)	10 mg/m ³	Belgium	TWA (8hr)	49 mg/m ³	Canada (Ontario)
TWA (8hr)	24.4 mg/m ³	Canada (Quebec)	TWA (8hr)	10 mg/m ³	France
TWA (8hr)	2.5 mg/m ³	Germany	TWA (8hr)	50 mg/m ³	Greece
TWA (8hr)	10 mg/m ³	Hungary	TWA (8hr)	10 mg/m ³	Italy
TWA (8hr)	5 mg/m ³	Netherlands	TWA (8hr)	8 mg/m ³	Poland
TWA (8hr)	10 ppm	Portugal	TWA (8hr)	10 mg/m ³	Romania
TWA (8hr)	10 mg/m ³	Spain	TWA (8hr)	9.9 mg/m ³	UK
TWA (8hr)	10 ppm	USA (ACGIH)	TWA (8hr)	50 ppm	USA (OSHA)

Engineering:

Maintain general industrial hygiene practice.

Personal Protective Equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

Respiratory Protection:

Required when vapors/aerosols are generated. Work under hood.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	Odor:	Pungent	Density at 20°C:	1.25 g/cm ³
Melting Point:	ND	Boiling Point:	~ 60 °C	Solubility:	~ 16 g/L
pH at 20°C:	2.5 @ 50 g/L in water	Explosion Limit:	NA	Flash Point:	ND
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Heat-sensitive, light-sensitive.

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Alkali metals, alkaline earth metals, metals (in powder form), peroxide compounds, fluorine, alcoholates, strong alkalis, ketones / alkalis, alkali hydroxides / alcohols, organic nitrocompounds, alkali amides, oxygen, oxygen / alkalis, nitrogen oxides, nonmetallic hydrogen compounds, bis(dimethylamino)dimethyl tin, amines, ammonia, alcohols / strong alkalis, phosphines

SECTION 11: TOXICOLOGICAL INFORMATION**Product Toxicity**

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

- Inhalation:** Coughing, dyspnoea, absorption, irritation symptoms in the respiratory tract, pneumonia bronchitis.
- Skin Contact:** Burns.
- Eye Contact:** Burns. Risk of blindness! Risk of corneal clouding. Burns of mucous membranes.
- Ingestion:** Burns in oesophagus and stomach, gastric spasms, bloody vomiting, dyspnoea. Risk of perforation in the oesophagus and stomach. After accidental swallowing the substance may pose a risk of aspiration. Passage into the lung (vomiting!) can result in a condition resembling pneumonia (chemical pneumonitis). Cannot be excluded: shock, cardiovascular failure, acidosis. Damage of kidneys.
- Further Data:** The product should be handled with the usual care when dealing with chemicals.

Component Toxicity**Acute Toxicity:****Acetic Acid**

LC50: Inhalation - Mouse - 2810 ppm

LD50: Oral - Rat - 3310 mg/kg

Chloroform

LC50: Inhalation - Rat - 47702 mg/m³

LD50: Oral - Rat - 695 mg/kg

Chronic Toxicity:**Chloroform**

NTP: Reasonably anticipated to be carcinogenic to humans

IARC Group 2B: Possibly carcinogenic to humans

Additional Data:**APPLICABLE TO PARTIAL COMPONENT:**

The following applies to Acetic acid – as the pure substance

Specific symptoms in animal studies:

Eye irritation test (rabbit): burns.

Skin irritation test (rabbit): burns.

Subacute to chronic toxicity

Bacterial mutagenicity: Salmonella typhimurium: negative.

No teratogenic effect in animal experiments.

Further toxicological information

Strongly corrosive substance.

After inhalation of vapours: Irritation symptoms in the respiratory tract, pneumonia bronchitis.

Inhalation may lead to the formation of oedemas in the respiratory tract.

After skin contact: Burns.

After eye contact: Burns. Risk of blindness! Risk of corneal clouding. burns of mucous membranes.

After swallowing: Burns in oesophagus and stomach. gastric spasms, bloody vomiting, dyspnoea. Risk of perforation in the oesophagus and stomach. Pulmonary failure possible after aspiration of vomit.

Cannot be excluded: shock, cardiovascular failure, acidosis. Damage of: kidneys.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Chloroform – as the pure substance

Specific symptoms in animal studies:

Eye irritation test (rabbit): Slight irritations.

Skin irritation test (rabbit): Slight irritations.

Subacute to chronic toxicity

The carcinogenic potential requires further clarification.

Bacterial mutagenicity: Ames test: negative.

Further toxicological information

After inhalation of vapors: coughing, dyspnoea, absorption.

After skin contact: Irritations. Drying-out effect resulting in rough and chapped skin. Danger of skin absorption.

After eye contact: Slight irritations.

After swallowing: nausea, vomiting, absorption. After accidental swallowing the substance may pose a risk of aspiration. Passage into the lung (vomiting!) can result in a condition resembling pneumonia (chemical pneumonitis).

Systemic effects:

After absorption: agitation, spasms, narcosis.

After long-term exposure to the chemical: drop in blood pressure, headache, ataxia (impaired locomotor coordination), gastrointestinal complaints, cardiovascular disorders. Damage of: liver, kidneys, heart.
 Effect potentiated by: ethanol
 Further data
 The product should be handled with the care usual when dealing with chemicals.

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of this product is not available.
APPLICABLE TO PARTIAL COMPONENT:
 The following applies to Acetic acid – as the pure substance
Biologic degradation:
 Biodegradation: 99 % /30 d (closed bottle test).
 Readily biodegradable.
Behavior in environmental compartments:
 Distribution: log p(o/w): -0.17 (experimental).
 No bioaccumulation is to be expected (log P(o/w) <1).
 Passage from aqueous solution into the atmosphere is not to be expected.
Ecotoxic effects:
Biological effects:
 Harmful effect on aquatic organisms. Harmful effect due to pH shift. Caustic even in diluted form.
 Fish toxicity: L.macrochirus LC50: 75 mg/L /96 h. P.promelas LC50: 88 mg/L /96 h.
 Daphnia toxicity: Daphnia magna EC50: 47 mg/L /24 h.
 Bacterial toxicity: Photobacterium phosphoreum EC50: 11 mg/L /15 min microtox test.
 Maximum permissible toxic concentration:
 Algeal toxicity: Sc.quadricauda IC5: 4000 mg/L /16 h.
 Bacterial toxicity: Ps.putida EC5: 2850 mg/L /16 h neutral.
 Protozoa: E.sulcatum EC5: 78 mg/L /72 h neutral.
APPLICABLE TO PARTIAL COMPONENT:
 The following applies to Chloroform – as the pure substance
Biologic degradation:
 Not degradable in water.
Behavior in environmental compartments:
 Distribution: log p(o/w): 2 (25 °C) (experimental);
 No appreciable bioaccumulation potential is to be expected (log P(o/w) 1-3).
 Distribution preferentially in air. Henry constant: 14084 Pa*m³/mol (experimental).
Ecotoxic effects:
Biological effects:
 Harmful effect on aquatic organisms. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities.
 Fish toxicity: L.macrochirus LC50: 18 mg/L /96 h. Daphnia toxicity: Daphnia magna EC50: 79 mg/L /48 h.
 Bacterial toxicity: activated sludge EC50: 1010 mg/L /3 h; Maximum permissible toxic concentration:
 Ps.putida EC5: 125 mg/L /16 h.
 Algeal toxicity: Maximum permissible toxic concentration: Sc.quadricauda IC5: 1100 mg/L /8 d.
 Protozoa: Maximum permissible toxic concentration: E.sulcatum EC5: >6560 mg/L /72 h.
Further Data: Do not allow to enter waters, waste water, or soil!

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

	Land (ADR/RID):	Sea (IMDG):	Air (ICAO/IATA):
UN No.:	2922	2922	2922
Proper Shipping Name:	Corrosive liquid, toxic, n.o.s. (acetic acid, chloroform mixture)	Corrosive liquid, toxic, n.o.s. (acetic acid, chloroform mixture)	Corrosive liquid, toxic, n.o.s. (acetic acid, chloroform mixture)
Class (Sub Risk):	8 (6.1)	8 (6.1)	8 (6.1)
Packing Group:	II	II	II

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: C: Corrosive

R-phrases: 10-22-34-38-40-48/20/22: Flammable. Harmful if swallowed. Causes burns. Irritating to skin. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

S-phrases: 23-26-45-36/37: Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wear suitable protective clothing and gloves.

Contains: Chloroform, acetic acid

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

10: Flammable.
22:Harmful if swallowed.
35:Causes severe burns.
38:Irritating to skin.
40:Limited evidence of a carcinogenic effect.
48/20/22:Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Revision Information

Revision Date: 2016-06-01
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Legend

NA: Not Applicable
ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.