

DENTSPLY

RINN® RAPID PROCESS FIXER

1. Identification of the substance/preparation and of the company/undertaking

Product name: RINN® RAPID PROCESS FIXER

Product code: 220406, 221406

Manufacturer: Photo Systems Inc., 7200 Huron River Dr., Dexter, MI 48130, U.S.A.

Customer Information Phone Number: 1-800-521-4042

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Product Use: Professional dental photographic processing solution (fixer).

Date Prepared: 12/11/2007

Version: 2.0

2. Composition/information on ingredients

Component	CAS	EINEC-No.	Weight %	Classification
WATER	7732-18-5	231-791-2	65-70	**
AMMONIUM THOSULFATE	7783-18-8	231-982-0	20-25	**
SODIUM SULFITE	7757-83-7	231-821-4	1-3	**
ACETIC ACID	64-19-7	200-580-7	1-3	C; R10, R35*
AMMONIUM SULFITE	10196-04-0	233-484-9	<2	**

*Symbol and R Phrase according to EC Annex 1

** Substance not listed in EC Annex 1

3. Hazards identification

Product: Not a hazardous substance.

4. First aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. Get medical attention if symptoms occur.

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give victim a glass of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Asthmatics or hypersensitive individuals may experience difficult breathing. Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

Supplemental Health Information: None of the components in this product is listed by IARC, NTP, or OSHA as carcinogen.

5. Fire-fighting measures

Extinguishing Media: The product is not flammable. Use agent appropriate for the surrounding area.

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

Hazardous Combustion Products: Fire or excessive heat may produce hazardous decomposition products. (See also Stability and Reactivity section). Carbon and nitrogen oxides.

Unusual Fire And Explosion Hazards: Mixture contains a strong reducing agent. Dried product residue can act as a reducing agent.

6. Accidental release measures

Personal precautions: Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid breathing mist or vapor. See Section 8 for recommendations on use of personal protective equipment.

Environmental precautions: Dike the spill. Prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil and place in noncombustible container for disposal in an approved and permitted landfill. Discharge to sewer requires approval of permitting authority. Working solution is able to be flushed to sewer with large amounts of water upon approval of regulatory agencies.

Waste disposal: Contaminated absorbent should be disposed of in accordance with local regulations.

7. Handling and storage

Personal precautions: Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Remove and wash contaminated clothing.

Storage: Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store with incompatible materials. (See Incompatibility section). Do not store or consume food, drink, or tobacco where they may become contaminated with this material. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal.

Ventilation: Match ventilation to conditions of use so as not to exceed any applicable exposure limits (see Section 8). Good general conditions of 10 or more room volumes per hour in the work area recommended.

8. Exposure controls / personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Ammonia, anhydrous	EU ELV	TWA	14 mg/m ³
	EU ELV	STEL	36 mg/m ³
	UK EH40 WELs	TWA	18 mg/m ³
	UK EH40 WELs	STEL	25 mg/m ³

Sodium Sulfite	None	None	None
Acetic Acid	EU ELV	TWA	25 mg/m ³
	ELV (IE)	TWA	25 mg/m ³
	ELV (IE)	STEL	37 mg/m ³
	ACGIH	TWA	10 ppm
	ACGIH	STEL	15 ppm
	OSHA	TWA	25mg/m ³

Ventilation: Avoid exposure to mists and vapors by mixing solutions in closed vessels and/or under local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should match conditions of use.

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary. If use conditions do not maintain vapors or fumes below exposure limits use suitable respiratory equipment. Respirator type: Acid gas. See Stability and Reactivity Section.

Eye Protection: Wear safety glassed with side shields or protective goggles whenever mixing or handling solutions.

Skin and body protection: Wear chemical impervious gloves and protective clothing suitable for the risk of exposure.

Recommended Decontamination Facilities: Eyewash facility, safety shower, washing facilities as appropriate to condition of use.

9. Physical and chemical properties

Physical form: liquid

Color: light yellow

Odor: ammonia odor

Solubility In Water: Complete

Specific Gravity: 1.11

Vapor Pressure: 18.0 mmHg

Vapor Density: Not determined

Volatile fraction by weight: 81.68

Boiling Point/Range: > 100°C

Ph: 4.34

Freezing Point: Not determined

Evaporation Rate: Not determined

Pounds Per Gallon: 9.26

V.O.C. is 27.92 g/L or 2.5% or 0.23 lb. /gal.

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions

Incompatibility: Strong oxidizing agents. Strong acids, sodium hypochlorite (bleach), Halogenated compounds, Strong bases. Contact with sodium hypochlorite (bleach) may form chloramines (toxic gas). Contact with strong acids liberate sulphur dioxide. Contact with base liberates ammonia. Contact with base liberates flammable material.

Hazardous Decomposition Products: Ammonia, chloramines, and oxides of sulfur.

Hazardous Polymerization: Will Not Occur

11. Toxicological information

Effects of Exposure

General advice:

Contains: Acetic acid which is a respiratory irritant in high airborne concentrations.

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: No specific hazard known. May cause transient irritation.

Skin: Inhalation: Expected to be a low hazard for recommended handling.

Ingestion: Expected to be a low ingestion hazard. However, some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for Acetic Acid (CAS 64-19-18):

Acute Toxicity Data:

LD50 Oral- rat- 3,310 -3,430 mg/kg

LD50 Oral: 4960 mg/kg

Inhalation LC50: 5620 ppm / 1.00 hr

Dermal LD50: 1,060 mg/kg

Skin irritation: severe

Eye irritation: severe

Eye irritation (washed eyes): severe

Eye irritation (unwashed eyes): severe

Data for Ammonium Sulphite (CAS 10196-04-0)

LD50 Oral- rat- 2,528 mg/kg

LD50 Oral: 1,904 mg/kg

LD50 Oral- rat- 2,500 mg/kg (10% in water)

LD50 Oral – mouse-1,900 mg/kg (10% in water)

Inhalation LC50-rat: >2.46 mg/l/6 hr

Dermal LD50: >1,000 mg/kg

Dermal LD50- guinea pig: >1.0g/kg

Skin irritation: slight

12. Ecological information

Not determined to this mixture. The following information is estimated from the components of the product.

Potential toxicity:

Toxicity to Fish LC50:	> 100 mg/l
Toxicity to Daphnia (EC50):	> 100 mg/l
Toxicity to Algae (IC50)	10-100 mg/l
Toxicity to other organisms (EC50):	> 100 mg/l

Persistence and degradability: Readily biodegradable

Chemical Oxygen Demand (COD): ca. 83 g/l

Biochemical Oxygen Demand (BOD): ca. 67 g/l

13. Disposal considerations

Working solution: Recover silver before disposal. Waste material is currently classified as hazardous under Council Directive 91/689/EEC. The European Waste Catalogue Code is 09 01 04 Fixer solutions.

The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

Product containers: Triple rinse with water. Waste product packaging may be consigned for recovery or disposal as non hazardous waste. Whenever possible, minimize waste by using the rinse water to make up the working solution. The European Waste Catalogue Code is 15 01 02 plastic packaging.

Waste product packaging contaminated by residues of hazardous contents should be consigned for disposal as hazardous waste. In this instance, the European Waste Catalogue Code is 15 01 10 packaging containing residues of or contaminated by dangerous substances.

14. Transportation Information

Not regulated for all modes of transportation.

DOT Class: NOT REGULATED

Hazard Class: NONE

UN No.: NOT APPLICABLE

Packing Group:

Guide No:

Ship Name:

15. Regulatory Information

Labelling:

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC. This reflects requirements for Europe whereas the product in your possession may carry a different version of the label dependent upon the date of manufacture and nation.

Notification status

Regulatory List	Notification Status
EINECS	y (positive listing)
TSCA	y (positive listing)
DSL	y (positive listing)

U.S. SARA TITLE III: None under Sara Title 313.

CALIF. PROP. 65:

CARCINOGENICITY: NONE OF THE COMPONENTS IN THIS CHEMICAL IS LISTED BY IARC, NTP, OR OSHA AS A CARCINOGEN.

DSL: All ingredients in this finished product are listed on the DSL for Canada.

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

16. Other information

The following is an explanation of the meaning of the Symbol letters and risk Phrases for the pure substance(s) referred to in Section 2 of this Safety Data Sheet.

C: Corrosive

R10: Flammable

R35: Causes severe burns.

Hazardous Materials Identification System (HMIS)

Health: 1

Flammability: 0

Reactivity: 0

Protective: B

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.