

# DENTSPLY

## RINN® RAPID PROCESS DEVELOPER

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

**Product name:** RINN® RAPID PROCESS DEVELOPER

**Product code:** 219406, 219436 - Developer

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

**Customer Information Phone Number:** 1-734-424-9625

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

**Product Use:** Professional dental photographic processing solution.

Date Prepared: 01/04/2010

Version: 3.0

### 2. Composition/information on ingredients

Component	CAS	EINEC-No.	Weight %	Classification
WATER	7732-18-5	231-791-2	80-90	**
SODIUM SULFITE	7757-83-7	231-821-4	1-5	**
SODIUM HYDROXIDE	1310-73-2	215-185-5	1-3	Xn, C, R35
HYDROQUINONE	123-31-9	204-617-8	1-3	Xn, N: Carc.Cat.3; Mut.Cat.3; R22, R40, R41, R43, R50, R68*
TETRASODIUM EDTA	64-02-8	200-573-9	< 1	Xn, R22, Xi, R41

\*Symbol and R Phrase according to EC Annex 1

\*\* Substance not listed in EC Annex 1

### 3. Hazards identification

**Product:** Harmful. Limited evidence of possible carcinogenic effect. Possible risk of irreversible effects. May cause sensitization by skin contact.

### 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:** 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. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire And Explosion Hazards:** None

**Combustion Products:** None (see also Stability and Reactivity section). Carbon dioxide and carbon monoxide and oxides of sulfur.

**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 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.

**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:** No special measures should be necessary under anticipated conditions of use.

**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**

<u>Chemical Name</u>	<u>Regulatory List</u>	<u>OHSA PEL</u>	<u>ACGIH TLV</u>
SODIUM HYDROXIDE	OSHA, ACGIH	2mg/m <sup>3</sup>	2mg/m <sup>3</sup> (C)
HYDROQUINONE	OSHA, ACGIH	2mg/m <sup>3</sup>	2mg/m <sup>3</sup> TWA
SODIUM SULFITE	none	none	none
TETRASODIUM EDTA	OSHA, ACGIH, NIOSH, AIHA	not determined	not determined

**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: full-face organic vapor/N95. If hazardous decomposition products are likely to have been released. Respirator type: Acid gas. See Stability and Reactivity Section.

**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.

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

**Skin and body protection:** Wear 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:** slightly yellow

**Odor:** mild odor

**Solubility In Water:** Complete

**Specific Gravity:** 1.08

**Vapor Pressure:** 18.0 mmHg

**Vapor Density:** Not determined

**Volatile fraction by weight:** 89.5

**Boiling Point/Range:** > 100°C

**Ph:** 11.15

**Freezing Point:** Not determined

**Evaporation Rate:** Not determined

**Pounds Per Gallon:** 9.0

**V.O.C.** is 7.65 g/L or 0.7% or 0.06 lb. /gal.

**Flash point:** does not flash

## 10. Stability and reactivity

**Stability:** Stable

**Conditions To Avoid:** None

**Incompatibility:** Strong Acids. Contact with strong acids may liberate sulphur dioxide.

**Hazardous Decomposition Products:** Carbon dioxide and carbon monoxide and oxides of sulfur.

**Hazardous Polymerization:** Will Not Occur

## 11. Toxicological information

### Effects of exposure for hydroquinone

**General advice:** This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. This mixture is not expected to be a dermal sensitization hazard to humans. The toxicological properties of this solution have not been investigated.

Contains: Hydroquinone. Hydroquinone has been classified as a Category 3 mutagen and carcinogen by the European Union based upon testing rats and mice given hydroquinone by stomach tube or at high dietary levels. The International Agency for Research on Cancer (IARC) under ranking for cancer potential has classified hydroquinone in Group 3, i.e. "not classifiable as a carcinogen. In the EU a

Category 3 mutagen is given a risk phrase R68 "Possible risk of irreversible effects" at concentrations above 1%, and a Category 3 carcinogen attracts a risk phrase R40 "Limited evidence of carcinogenic effect at concentrations above 1%. Exposure to products containing such substances should be controlled to below established control limits and special care should be taken with pregnant or breast-feeding women to ensure appropriate controls are in place to control the risk.

### Acute Toxicity for hydroquinone:

LD50 Oral- rat- 302 mg/kg

LD50 Dermal – Mammal – 5,970 mg/kg

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

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

**Skin:** May cause sensitization by skin contact.

**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.

## 12. Ecological information

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

## Potential toxicity:

Fish LC50:	1-10 mg/l
Daphnid EC50:	1-10 mg/l
Algal IC50:	10-100 mg/l

Waste treatment organisms EC50: &gt; 100 mg/l

Organics Readily Degradable: Readily biodegradable

Potential Bioaccumulation: log Pow &lt; 1

COD (approximate): 62 g/l

BOD (approximate): 36 g/l

**13. Disposal considerations**

**Working solution:** Waste material is currently classified as hazardous under Council Directive 91/689/EEC. The European Waste Catalogue Code is 09 01 01 Water based developer and activator.

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:

The data below reflects current legislative 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.

pH: 11.15



### Symbol/Indication of Danger:

Xn: Harmful

### Risk Phrases:

R40: Limited evidence of a carcinogenic effect.  
R 68: Possible risk of irreversible effects.  
R43: May cause sensitization by skin contact.

### Safety Phases:

S36/37: Wear suitable protective clothing and gloves.

TSCA: All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

U.S. SARA TITLE III: Hydroquinone is listed under Sara Title 313.

CALIF. PROP. 65: Product contains a mixture which includes trace amounts of Trisodium NTA (Cas# 5064-31-3). While IARC, NTP, ACGIH, AND OSHA do not classify the product in this mixture as a carcinogen or suspected carcinogen according to the manufacturer, the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986, or Proposition 65 requires the following information. This regulation does not address di minimus levels; therefore, even trace amounts of the chemicals included on Proposition 65's list of chemicals known to the State of California to cause cancer or reproductive toxicity must be noted with the "Safe Harbor" wording. WARNING: This product contains Trisodium NTA – a related product to Trisodium NTA monohydrate (Cas# 18662-53-8) known to the State of California to cause cancer, birth defects or other reproductive harm. 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.

Xn: Harmful

N: Dangerous to the environment

R22: Harmful if swallowed.

R35: Causes severe burns.

R40: Limited evidence of a carcinogenic effect.

R41: Risk of serious damage to eyes.

R43: May cause sensitization by skin contact.

R50: Very toxic to aquatic organisms.

R68: Possible risk of irreversible effects.

**WHMIS (Canada):** D2B

**WHMIS Symbol(s):**



## Hazardous Materials Identification System (HMIS)

Health: 2

Flammability: 0

Reactivity: 0

Protective: C

**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.