

# FORMULA ONE MAX DEVELOPER & REPLENISHER

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Dr., Dexter, MI 48130

Product Name: **FORMULA ONE MAX DEVELOPER**

Product Number: **728010, 728290, 728322**

**Product Use:** Photographic developer

**Customer Information Phone Number:**

1-734-424-9625

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

Date Reviewed: 2/20/2015

Version: 2.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

Acute toxicity, Oral (Category 4), H302

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

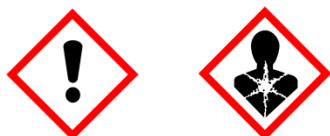
Specific organ toxicity Oral (Category 2), Kidney, H373

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: WARNING**

#### Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause allergic skin reaction
H318	Causes severe eye damage
H335	May cause respiratory irritation

H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H370	Causes damage to organs
H373	Specific organ toxicity – repeated exposure, Oral (Category 2), Kidney, Liver, Heart
H410	Very toxic to aquatic life

## Precautionary statement(s)

P201	Obtain special instructions before use
P261	Avoid breathing mist
P264	Wash skin thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P273	Avoid release into the environment
P280	Wear protective gloves, eye protection
P301 + P312	IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell
P302 + P352	IF ON SKIN: Wash with plenty of soap
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse
P391	Collect spillage
P501	Dispose of contents to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
SODIUM SULFITE	7681-57-4	N.E.	N.E.	10-15
POTASSIUM CARBONATE	584-08-7	N.E.	N.E.	5-10
METHANOL	67-56-1	260 mg/m <sup>3</sup>	262 mg/m <sup>3</sup> (skin)	3-5
HYDROQUINONE	123-31-9	2mg/m <sup>3</sup>	2mg/m <sup>3</sup>	1-3

### 4. FIRST AID MEASURES

#### 4.1 Description of 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. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. 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. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

## **5. FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

Use agent appropriate for surrounding fire.

### **5.2 Special Hazards arising from substance or mixture**

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur and nitrogen.

### **5.3 Advise for firefighters**

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage.

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.

### **6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### **7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 Control parameters**

See Section 3.

## 8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Personal protective equipment

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary. However, if use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Light straw color, no odor.

Solubility In Water: Complete

Boiling Point: > 100° C

Flash Point: Nonflammable

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Vapor Pressure: 18 mm Hg @ 20° C

Ph: 10.85

Specific Gravity: 1.25 g /ml

Melting Point: Not applicable

Freezing Point: N.E.

Evaporation Rate: > 1

Vapor Density: (air = 1): 0.6

Percent Volatile: 70.21

Molecular Weight: Not applicable

Pounds Per Gallon: 10.45

V.O.C. is 48.8 g/L or 3.9% or 0.41 lb. /gal.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable

**10.2 Chemical stability**

Conditions To Avoid: None

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

Contact with acids and metals such as aluminum, magnesium, zinc, and tin.

**10.5 Incompatible Materials**

Strong acids will liberate sulfur dioxide, carbon dioxide.

**10.6 Decomposition Products**

May produce oxides of sulfur and carbon

**11. TOXICOLOGICAL INFORMATION****11.1 Information of toxicological effects****Component information*****Hydroquinone 123-31-9*****Acute toxicity:**

Oral LD-50 (rat)

367.3 mg/kg (OECD Test Guidance 401)

Dermal LD-50 (rabbit)

>2,000 mg/kg (OECD Test Guidance 402)

Inhalation: no data

**Skin irritation: no data**

**Eye irritation: no data**

**Respiratory or Skin Sensitization** (in vivo assay – mouse (OECD Test Guidance 429)

May cause sensitization by skin contact.

May cause allergic skin reaction.

**Carcinogenicity/mutagenicity:** none

***Potassium Carbonate 584-08-7*****Acute toxicity:**

LD50 Oral – rate – 1970 mg/kg

Dermal:

No data available

Inhalation:

No data available

**Skin irritation:**

No data available

**Eye irritation:**

No data available

**Respiratory or Skin Sensitization**

No data available

**Carcinogenicity/mutagenicity:** none

**Sodium Sulfite 7757-83-7****Acute toxicity:**

Oral LD-50 (rat) 3,560 mg/kg  
 Inhalation LD-50 (rat) >5,500 mg/m<sup>3</sup> - 4 h

Dermal: no data

**Skin irritation:**

Skin – rabbit  
 Result: No skin irritation

**Eye irritation:**

Skin – rabbit  
 Result: No skin irritation

**Respiratory or Skin Sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none

**Methanol 67-56-1****Acute toxicity:**

Oral LD-50 (rat) 1,187 – 2769 mg/kg  
 LDLO Oral – human 143 mg/kg

**Inhalation LC-50**

LC-50 Inhalation (rat) 4h- 128.2 mg/l

**Dermal LD50**

LD-50 dermal (rabbit) 17,100 mg/kg

**Skin irritation:**

Skin – rabbit  
 Result: No skin irritation

**Eye irritation:**

Skin – rabbit  
 Result: No skin irritation

**Respiratory or Skin Sensitization**

Maximisation test – guinea pig – OECD Test Guideline 406 – Does not cause skin sensitization.

**Carcinogenicity/mutagenicity:** none

**12. ECOLOGICAL INFORMATION****Component information****Hydroquinone 123-31-9****12.1 Toxicity**

Toxicity to fish	LC50-Oncorhynchus mykiss (rainbow trout) – 0.4 -0.1 mg/l – 96h
Toxicity to daphnia and other aquatic invertebrates	LC50 – Daphnia magna (Water flea) – 0.13 – 48h
Toxicity to algae	EC50 – Pseudokirchneriella subcapitata (green algae) -0.335 mg/l – 72 h

**12.2 Persistence and degradability**

Biodegradability                      Biotic/Aerobic – exposure time 14d  
Result: 86% - Readily biodegradable

**12.3 Bioaccumulative potential**

Bioaccumulation                      Leuciscus idus (golden orfe) – 3d – 50 µg  
Bioconcentration factor (BCF):40

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

Very toxic to aquatic life with long lasting effects.

***Potassium Carbonate 584-08-7*****12.1 Toxicity**

Toxicity to fish                      LC50- Pimephales promelas (fathead minnow) -510 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

None

***Sodium Sulfite 7757-83-7*****12.1 Toxicity**

Toxicity to fish                      LC50- Gambusia affinis (Mosquito fish) -660 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

None

***Methanol 67-56-1*****12.1 Toxicity**

Toxicity to fish	LC50- <i>Lepomis macrochirus</i> (bluegill) – 15,400 mg/l – 96h
Toxicity to daphnia	EC50 – <i>Daphnia magna</i> (water fleas) – 10,000 mg/l – 48 h

**12.2 Persistence and degradability**

Aerobic – Result: 72% - readily biodegradable

**2.3 Bioaccumulative potential**

Bioaccumulation                      *Cyprinus carpio* (carp) – 72 d at 20 degrees C.

**Mobility in soil**

Will not adsorb on soil.

**12.5 Result of PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

**12.5 Other adverse effects**

None

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

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.

**14. TRANSPORT INFORMATION****DOT (US)**

Not regulated



**15. REGULATORY INFORMATION****SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:

	Cas#	Revision Date
Hydroquinone	123-31-9	2007-07-01

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	Cas#	Revision Date
Hydroquinone	123-31-9	2007-07-01
Methanol	67-56-1	2007-07-01

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA**

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

**SCAQMD Rule 443.1**

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 48.8 g/L  
Vapor Pressure: 18 mm Hg@ 20 Degrees C

**16. OTHER INFORMATION****Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H302  
Serious eye damage (Category 1), H318  
Skin sensitization (Category 1), H317  
Acute aquatic toxicity (Category 1), H400

**HMIS RATING**

Health: 2  
Flammability: 0  
Reactivity: 0

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.