

# MSDS Report

ACCREDITATION CERTIFICATE OF CHINA NATIONAL  
ACCREDITATION BOARD FOR LABORATORIES (No.L0412)

15 January , 2009

Product name: Saphira Premium Developer for Positive Analogue Plate

Catalogue number: SUT1.F4000

Company Information: Heidelberg Asia Pte Ltd  
1A International Business Park  
#08-02 Singapore 609933

Tel: +65 6664 2100

## Material Safety Data Sheet

## Section 1 - Chemical Product and Company Identification

Product name: Saphira Premium Developer for  
Positive Analogue plate

Catalogue number: SUT1.F4000

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Emergency Telephone: +65 6664 2100

## Section 2 – Composition/Information on Ingredient

**Chemical composition**

Chemical name	CAS No.	Formula	Composition	EINECS
Sodium Silicate	1344-09-8	Na <sub>2</sub> Si <sub>3</sub> O <sub>7</sub>	10-25%	215-687-4
Sodium hydroxide	1310-73-2	NaOH	2-3%	215-185-5
Potassium hydroxide	1310-58-3	KOH	1-2%	215-181-3
Ethylenediaminetetraacetic acid, tetrasodium salt dihydrate	10378-23-1	C <sub>10</sub> H <sub>12</sub> N <sub>2</sub> O <sub>8</sub> Na <sub>4</sub> ·2H <sub>2</sub> O	0.5-1%	200-573-9
Water	7732-18-5	H <sub>2</sub> O	65-80%	231-791-2

## Section 3 - Hazards Identification

**Potential Health Effects**

**Eye:** Causes severe eye burns. May cause chemical conjunctivitis and corneal damage.

**Skin:** Causes skin burns. May cause deep, penetrating ulcers of the skin.

**Ingestion:** Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock.

**Inhalation:** Harmful if inhaled. Irritation may lead to chemical pneumonitis and pulmonary edema. Causes chemical burns to the respiratory tract.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

#### Section 4-First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes. Do NOT allow victim to rub eyes or keep eyes closed. Get medical aid.

**Skin:** Immediately wash skin with soap and copious amounts of water. While removing contaminated clothing and shoes. Wash clothing before reuse. If irritation develops and persists, seek medical attention.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

#### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Avoid prolonged or repeated exposure.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from metals. Keep away from flammable liquids. Corrosives area.

## Section 8 - Exposure Controls, Personal Protection

### **Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### **Personal Protective Equipment**

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Color:</b>	Blue
<b>Odor:</b>	Slight odor
<b>pH:</b>	13.8
<b>Vapor Pressure:</b>	Not available
<b>Viscosity:</b>	3cp (25°C)
<b>Boiling Point:</b>	105°C
<b>Freezing/Melting Point:</b>	0 --5°C
<b>Autoignition Temperature:</b>	Not available
<b>Flash Point:</b>	>90°C
<b>Explosion Limits: Lower:</b>	Not available
<b>Explosion Limits: Upper:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Solubility in water:</b>	Soluble
<b>Specific Gravity/Density:</b>	1.02g/cm <sup>3</sup>

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials.

**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, Corrosive to metals such as aluminum, tin, and zinc.

**Hazardous Decomposition Products:** May produce irritating and toxic fumes and gases. Carbon monoxide, carbon dioxide, sodium oxide, oxides of potassium.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:** CAS# 1344-09-8: None listed

CAS# 1310-73-2: WB4900000

CAS# 1310-58-3: TT2100000

CAS# 10378-23-1: None listed

CAS# 7732-18-5: ZC0110000

**LD50/LC50:** CAS# 1310-73-2:

Draize test, rabbit, eye: 400 ug Mild;

Draize test, rabbit, eye: 1% Severe;

Draize test, rabbit, eye: 50 ug/24H Severe;

Draize test, rabbit, eye: 1 mg/24H Severe;

Draize test, rabbit, skin: 500 mg/24H Severe;

CAS# 1310-58-3:

Draize test, rabbit, skin: 50 mg/24H Severe;

Oral, rat: LD50 = 273 mg/kg;

CAS#7732-18-5:

Oral, rat: LD50 > 90 ml/kg

**Carcinogenicity:** Sodium Silicate -The toxicological properties have not been fully investigated.

**Sodium hydroxide** - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Potassium hydroxide** - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Ethylenediaminetetraacetic acid, tetrasodium salt dihydrate** - The toxicological properties have not been fully investigated.

**Water** -Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** The chemical, physical, and toxicological properties have not been thoroughly investigated.

## Section 12 - Ecological Information

**Ecotoxicity:** Sodium hydroxide: Fish: Mosquito fish: LC50 = 125 mg/l/96 h; Daphnia and other aquatic invertebrates: Daphnia: EC50 = 40, 38 mg/l/48 h, Immobilization;

Potassium hydroxide: Fish: Mosquito Fish: LC50 = 80.0 mg/l/ 24 H.;

**Other:** Do not empty into drains.

## Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location.

Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

## Section 14 - Transport Information

	IATA	IMO	RID/ADR
Un number	Not regulated	Not regulated	Not regulated
Proper shipping name			
Hazard class			
Packing group			

## Section 15 - Regulatory Information

### European/International Regulations

Reference to the local, national and EU / international regulations.

### Hazard Symbols: C



### Risk Phrases:

R 34 Causes burns

### Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 37/39 Wear suitable gloves and eye/face protection. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## Section 16 - Additional Information

**MSDS Creation Date:** Jan 15, 2009

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.