# SAFETY DATA SHEET

**Issuing date** 2014-08-20 **Revision Date** 2014-05-08 **Version** 1

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product name:** Rapid Access Developer

**Product code:** 1838374DEV

**Supplier** Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

**Product Use:** Photographic chemical. Restricted to professional users.

## 2. HAZARDS IDENTIFICATION

**Classification**

| | |
|---|---|
| Skin corrosion/irritation | Category 1 |
| Serious eye damage/eye Irritation | Category 1 |
| Skin Sensitization | Category 1 |
| Germ cell mutagenicity | Category 2 |
| Carcinogenicity | Category 2 |
| Corrosive to metals | Category 1 |

**Label elements**

**Emergency Overview**

**Signal word** **Danger**

**hazard statements**
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer
May be corrosive to metals

**Appearance** Liquid **Physical state** liquid **Odor** Slight

**Precautionary Statements - Prevention**
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Keep only in original container.

**Precautionary Statement - Response**
Immediately call a POISON CENTER or doctor/physician.
**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
**Skin**
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
**Ingestion**
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
**Spill**
Absorb spillage to prevent material damage.

**Precautionary Statement - Storage**
Store in a closed container. Store in corrosive resistant container with a resistant inliner.

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC)**
• Not applicable

**Other Information**
Very toxic to aquatic life.

8.717% of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | Weight % | Trade Secret |
|---|---|---|---|
| Water<br>7732-18-5 | 7732-18-5 | >60 | * |
| Potassium sulfite<br>10117-38-1 | 10117-38-1 | 5-10 | * |
| Hydroquinone<br>123-31-9 | 123-31-9 | 5-10 | * |
| Sodium borate<br>1330-43-4 | 1330-43-4 | 0.1-1 | * |
| Potassium hydroxide<br>1310-58-3 | 1310-58-3 | <0.01 | * |

*The exact percentages (concentrations) have been withheld as trade secrets.

## 4. FIRST AID MEASURES

**First Aid Measures**

**General advice** If symptoms persist, call a physician.

**Eye contact** Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

**Skin contact** Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

**Ingestion** If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed**

**Main Symptoms** Causes severe skin burns and eye damage. Rashes. Difficulty breathing. Burning. Coughing and/ or wheezing.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous Combustion Products**
Carbon oxides.

**Explosion Data**
**Sensitivity to Mechanical Impact** None.
**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** For personal protection see section 8. Ensure adequate ventilation.

**Environmental precautions**

**Environmental precautions** Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place.

**Incompatible products** Strong acids. Oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines** .

| Chemical Name | ACGIH TLV | AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs | OSHA PEL | Advisory OEL |
|---|---|---|---|---|
| Hydroquinone 123-31-9 | TWA: 1 mg/m³ | | TWA: 2 mg/m³ | |
| Sodium borate 1330-43-4 | STEL 6 mg/m³ TWA: 2 mg/m³ | | - | |
| Potassium hydroxide 1310-58-3 | Ceiling: 2 mg/m³ | | - | |
| Benzyl alcohol 100-51-6 | - | TWA: 10 ppm | - | |
| Polyethylene glycol 25322-68-3 | - | TWA: 10 mg/m³ | - | |

**Appropriate engineering controls**

**Engineering Measures** Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear:: Goggles.

**Skin and body protection** Wear protective gloves/clothing. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

| | |
|---|---|
| **Hygiene measures** | Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Remove and wash contaminated clothing before re-use. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL AND CHEMICAL PROPERTIES**

| | | | |
|---|---|---|---|
| **Physical state** | liquid | | |
| **Appearance** | Liquid | **Odor** | Slight |
| **Color** | clear light yellow | **Odor Threshold** | No information available |

| **Property** | **Values** | **Remarks/ • Method** |
|---|---|---|
| **ph** | 12.2 | No information available |
| **Melting point/range:** | | No information available |
| **Boiling point/boiling range** | > 100 °C | No information available |
| **Flash Point** | | No information available. |
| **Evaporation rate** | | No information available |
| **Flammability (solid, gas)** | | No information available |
| **upper flammability limit** | | |
| **lower flammability limit** | | |
| **Vapor pressure** | 24 mbar @ 20 °C | No information available |
| **Vapor density** | 0.6 | No information available |
| **Specific Gravity** | | No information available |
| **Water Solubility** | completely soluble | No information available |
| **Solubility in other solvents** | | No information available |
| **Partition coefficient: n-octanol/water** | | No information available |
| **Autoignition temperature** | | No information available |
| **Decomposition temperature** | | No information available |
| **Viscosity, kinematic** | | No information available |
| **Viscosity, dynamic** | | No information available |
| **Explosive properties** | No information available | |
| **Oxidizing Properties** | No information available | |

**Other information**

| | |
|---|---|
| **Softening point** | No information available |
| **Density VALUE** | No information available |
| **Bulk Density VALUE** | No information available |

## 10. STABILITY AND REACTIVITY

**Reactivity**
None under normal use conditions.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Contact with strong acids liberates sulfur dioxide.

**Conditions to Avoid**
Heat, flames and sparks.

**Incompatible Materials**
Strong acids. Oxidizing agents.

**Hazardous Decomposition Products**
Carbon oxides, Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Inhalation of mist is expected to cause respiratory irritation. Contact with strong acids liberates sulfur dioxide.

**Eye contact** Expected to be severely irritating or corrosive based on components present in formulation and the pH of the overall product.

**Skin contact** Expected to be severely irritating or corrosive based on components present in formulation and the pH of the overall product.

**Ingestion** May be harmful if swallowed. Can burn mouth, throat, and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

**Toxicology data for the components**

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Hydroquinone<br>123-31-9 | 320 mg/kg ( Rat )<br>Oral LD50 Rat 320 mg/kg (Source: IUCLID) | > 4800 mg/kg (Rat) | - |
| Sodium borate<br>1330-43-4 | 2660 mg/kg ( Rat )<br>Oral LD50 Rat 2660 mg/kg (Source: IUCLID) | 2000 mg/kg ( Rabbit )<br>Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID) | - |
| Potassium hydroxide<br>1310-58-3 | 214 mg/kg ( Rat )<br>Oral LD50 Rat 214 mg/kg (Source: IUCLID) | - | - |
| Benzyl alcohol<br>100-51-6 | 1230 mg/kg ( Rat )<br>Oral LD50 Rat 1230 mg/kg (Source: IUCLID) | 2 g/kg ( Rabbit )<br>Dermal LD50 Rabbit 2 g/kg (Source: NLM_CIP) | 8.8 mg/L ( Rat ) 4 h<br>Inhalation LC50 Rat 8.8 mg/L 4 h (Source: NLM_CIP) |
| Polyethylene glycol<br>25322-68-3 | - | 20 mL/kg ( Rabbit )<br>Dermal LD50 Rabbit >20 mL/kg (Source: IUCLID) | - |

| Chemical Name | Other applicable information |
|---|---|
| Potassium sulfite | Moderate skin irritation |

| | |
|---|---|
| Hydroquinone | Moderate eye irritation<br>Causes sensitization on guinea-pigs.<br>Mild skin irritation<br>Can be absorbed through skin.<br>(1.1 ug/cm2/hr)<br>Negative in bacterial mutagenicity assays. Evidence for mutagenicity (chromosome breakage, sister-chromatid exchanges) in in vivo and in vitro animal studies.<br>Hydroquinone has been classified as a Category 3 mutagen and carcinogen by the European Union based on testing of 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 European Union a Category 3 mutagen attracts the risk phrase R68 "Possible risk of irreversible effects" at concentrations above 1%, and a Category 3 carcinogen attracts the risk phrase R40 "Limited evidence of a 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. |
| Sodium borate | Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed. |
| Potassium hydroxide | Severe skin irritation<br>Causes eye burns |

**Information on toxicological effects**

**Symptoms** Allergic skin reactions including rash, dermatitis, irritation, and itching.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Corrosivity** Based on pH, may be corrosive to skin and eyes.

**Sensitization** This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. A very similar mixture was negative in dermal sensitization studies with and without prior sensitization to hydroquinone. Based on the results of these studies, this mixture is not expected to present a dermal sensitization hazard to humans. May cause sensitization by skin contact.

**mutagenic effects** No specific testing was done on this product. Mutagenic testing of the hazardous ingredient in this product has resulted in some positive mutagenic results.

**Carcinogenicity** Contains a known or suspected carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Hydroquinone<br>123-31-9 | A3 | | | |

*ACGIH: (American Conference of Governmental Industrial Hygienists)*
*A3 - Animal Carcinogen*

**Reproductive toxicity** Contains ingredients that are suspected reproductive hazards. However, based on available data the product should not be classified for reproductive effects.

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Chronic toxicity** Effects expected to be similar to those seen acutely.

**Target Organ Effects** Skin, Eyes, Respiratory system.

**Aspiration Hazard** No information available.

**Numerical measures of toxicity - Product Information**

**Unknown acute toxicity** 8.717% of the mixture consists of ingredient(s) of unknown toxicity

**The following values are calculated based on chapter 3.1 of the GHS document** .

**ATEmix (oral)** 5378 mg/kg

**ATEmix (dermal)** 80672 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Very toxic to aquatic life.

8.481% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates |
|---|---|---|---|---|
| Hydroquinone 123-31-9 | 0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 | 0.1 - 0.18: 96 h Pimephales promelas mg/L LC50 static 0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L LC50 flow-through 0.17: 96 h Brachydanio rerio mg/L LC50 | | 0.29: 48 h Daphnia magna mg/L EC50 |
| Sodium borate 1330-43-4 | 2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 158: 96 h Desmodesmus subspicatus mg/L EC50 | 340: 96 h Limanda limanda mg/L LC50 | | 1085 - 1402: 48 h Daphnia magna mg/L LC50 |
| Glycine, N,N-bis[2-[bis(carboxymethyl )amino]ethyl]-, pentasodium salt 140-01-2 | 2.6: 72 h Desmodesmus subspicatus mg/L EC50 | 1005 - 1250: 96 h Lepomis macrochirus mg/L LC50 static 300: 96 h Pimephales promelas mg/L LC50 static | | 500: 48 h Daphnia magna mg/L EC50 |
| Benzyl alcohol 100-51-6 | | 10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static | | 23: 48 h water flea mg/L EC50 |

**Persistence and degradability**
No data is available on the product itself. Expected to be readily biodegradable.

**Bioaccumulation:**
No information available.

| Chemical Name | log Pow |
|---|---|
| Hydroquinone 123-31-9 | 0.5 |
| Potassium hydroxide 1310-58-3 | 0.65<br>0.83 |

**Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste Disposal Methods** Should not be released into the environment. Dispose of in accordance with local regulations.

**Contaminated packaging** Do not re-use empty containers. Dispose of in accordance with local regulations.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---|---|---|---|---|
| Hydroquinone 123-31-9 | | Included in waste stream: K060 | | |

| Chemical Name | California Hazardous Waste Status |
|---|---|
| Potassium hydroxide<br>1310-58-3 | Toxic<br>Corrosive |

## 14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

**DOT**

| | |
|---|---|
| **UN/ID No** | UN3266 |
| **Proper Shipping Name** | Corrosive liquid, basic, inorganic, n.o.s. |
| **Technical Name** | Hydroquinone, Potassium hydroxide |
| **Hazard class** | 8 |
| **Packing Group** | III |
| **Special Provisions** | IB3, T7, TP1, TP28 |
| **Emergency Response Guide Number** | 154 |

**TDG**

| | |
|---|---|
| **UN/ID No** | UN3266 |
| **Proper Shipping Name** | Corrosive liquid, basic, inorganic, n.o.s. |
| **Technical Name** | Hydroquinone, Potassium hydroxide |
| **Hazard class** | 8 |
| **Packing Group** | III |

**ICAO/IATA**

| | |
|---|---|
| **UN/ID No** | UN3266 |
| **Proper Shipping Name** | Corrosive liquid, basic, inorganic, n.o.s. |
| **Technical Name** | Hydroquinone, Potassium hydroxide |
| **Hazard class** | 8 |
| **Packing Group** | III |
| **ERG Code** | 8L |
| **Special Provisions** | A3, A803 |

**IMDG/IMO**

| | |
|---|---|
| **UN/ID No** | UN3266 |
| **Proper Shipping Name** | Corrosive liquid, basic, inorganic, n.o.s. |
| **Technical Name** | Hydroquinone, Potassium hydroxide |
| **Hazard class** | 8 |
| **Packing Group** | III |
| **EmS No.** | F-A, S-B |
| **Special Provisions** | 223, 274 |
| **Marine pollutant** | Hydroquinone |

This corrosive material, as per 49 CFR §173.154 and when the product meets the packaging requirements of 49 CFR §173.154 (b)(2) [inner packagings not over 5.0 L (1.3 gallons) net capacity each for liquid] is excepted from labeling and placarding requirements so long as the material is not offered for transport by aircraft.

For transportation information, go to: http://ship.carestream.com

## 15. REGULATORY INFORMATION

## International Inventories

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **EINECS/ELINCS** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL** | Complies |
| **PICCS** | Complies |
| **AICS** | Complies |
| **NZIoC** | Complies |

**Legend**

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

## U.S. Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical Name | SARA 313 - Threshold Values % |
|---|---|
| Hydroquinone - 123-31-9 | 1.0 |

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute Health Hazard** | Yes |
| **Chronic Health Hazard** | Yes |
| **Fire Hazard** | No |
| **Sudden Release of Pressure Hazard** | No |
| **Reactive Hazard** | No |

**Clean Water Act**

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|---|---|---|---|
| Potassium hydroxide | 1000 lb | | | X |

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

| Chemical Name | HAPS data | VOC Chemicals | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|---|---|---|---|---|
| Hydroquinone - 123-31-9 | | Group I | | |
| Benzyl alcohol - 100-51-6 | | Group III | | |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | SARA Product RQ |
|---|---|---|---|
| Hydroquinone | 100 lb | 100 lb | |
| Potassium hydroxide | 1000 lb | | |

**TSCA**

| Component | U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances |
|---|---|
| Hydroquinone<br>123-31-9 ( 5-10 ) | 10/04/1984 |

## U.S. State Regulations

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---|---|---|---|---|
| Hydroquinone | X | X | X | X | X |
| Sodium borate | X | | X | | |
| Potassium hydroxide | X | X | X | | X |
| Benzyl alcohol | X | | X | | |

## International Regulations

**Mexico - Grade** Moderate risk, Grade 2

| Chemical Name | Carcinogen Status | Exposure Limits |
|---|---|---|
| Hydroquinone | A3 | Mexico: TWA 2 mg/m³ |
| Sodium borate | | Mexico: TWA 1 mg/m³ |

## 16. OTHER INFORMATION

| | | | |
|---|---|---|---|
| **NFPA** | **Health Hazard** 3 | **Flammability** 1 | **Instability** - |
| **HMIS** | **Health Hazard** 3* | **Flammability** 1 | **Physical Hazard** 0 |

**Issuing date** 2014-02-05
**Revision Date** 2014-05-08
**Revision Note** (M)SDS sections updated

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**

# SAFETY DATA SHEET

**Issuing date** 2014-03-28 **Revision Date** 2014-03-28 **Version** 1

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product name:** Rapid Access Fixer

**Product code:** 1838374FIX

**Supplier** Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

**Product Use:** Photographic chemical. Restricted to professional users.

## 2. HAZARDS IDENTIFICATION

**Classification**

| | |
|---|---|
| Acute Toxicity - Oral | Category 4 |
| Acute Toxicity - Dermal | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye Irritation | Category 2B |

**Label elements**

**Emergency Overview**

**Signal word** **Warning**

**hazard statements**
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes eye irritation

**Appearance** Liquid **Physical state** liquid **Odor** Odorless

**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

**Precautionary Statement - Response**
IF exposed or concerned.
**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
**Skin**
IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
**Ingestion**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC)**
• Not applicable

**Other Information**
Harmful to aquatic life with long lasting effects. Dried product residue can act as a reducing agent. Drying of this product on clothing or combustible materials may cause fire. Prolonged exposure may cause chronic effects. May cause adverse thyroid effects. Contact with strong oxidizers or acids may release very toxic gas.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | Weight % | Trade Secret |
|---|---|---|---|
| Water<br>7732-18-5 | 7732-18-5 | 60 - 65 | * |
| Ammonium thiocyanate<br>1762-95-4 | 1762-95-4 | 25 - 30 | * |
| Ammonium thiosulfate<br>7783-18-8 | 7783-18-8 | 10 - 15 | * |
| Sodium bisulfite<br>7631-90-5 | 7631-90-5 | 0.1 - 1 | * |
| Ammonium bisulfite<br>10192-30-0 | 10192-30-0 | 0.1 - 1 | * |

*The exact percentages (concentrations) have been withheld as trade secrets.

## 4. FIRST AID MEASURES

**First Aid Measures**

**General advice** — IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE. Show this material safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray. If hydrogen cyanide gas is liberated due to contact with a strong oxidizer or acid, it may cause dizziness, headache, rapid respiration, rapid pulse, unconsciousness, convulsions and death.

**Eye contact** — Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention immediately if symptoms occur.

**Skin contact** Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

**Ingestion** If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Rinse mouth.

**Protection of First-aiders** Use personal protective equipment.

**Most important symptoms and effects, both acute and delayed**

**Main Symptoms** Hives. Itching. Rashes. Difficulty breathing. Coughing and/ or wheezing.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. In the event that hydrogen cyanide gas is released, the local emergency ambulance/resuscitation service or physician should be informed that the patient may have been exposed to hydrogen cyanide gas.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Dry chemical, $CO_2$, alcohol-resistant foam or water spray.

**Unsuitable Extinguishing Media**
Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**
Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

**Hazardous Combustion Products**
Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides. Hydrogen cyanide.

**Explosion Data**
**Sensitivity to Mechanical Impact** None.
**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. For personal protection see section 8.

**Environmental precautions**

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Do not eat, drink or smoke when using this product. Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups. Drying of this product on clothing or combustible materials may cause fire.

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Store in original container. Do not allow evaporation to dryness.

**Incompatible products** Acids. Sodium hypochlorite. Strong bases. Oxidizing agents. Halogenated compounds. Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines** .

| Chemical Name | ACGIH TLV | AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs | OSHA PEL | Advisory OEL |
|---|---|---|---|---|
| Ammonium thiocyanate 1762-95-4 | - | | TWA: 5 mg/m³ S* | |
| Sodium bisulfite 7631-90-5 | TWA: 5 mg/m³ | | - | |

**Appropriate engineering controls**

**Engineering Measures** Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear:. Goggles.

**Skin and body protection** Wear protective gloves/clothing. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL AND CHEMICAL PROPERTIES**

| | | | |
|---|---|---|---|
| **Physical state** | liquid | | |
| **Appearance** | Liquid | **Odor** | Odorless |
| **Color** | clear colorless | **Odor Threshold** | No information available |

| **Property** | **Values** | **Remarks/ • Method** |
|---|---|---|
| **ph** | 5.4 | No information available |
| **Melting point/range:** | | No information available |
| **Boiling point/boiling range** | > 100 °C / 212 °F | No information available |
| **Flash Point** | | No information available. |
| **Evaporation rate** | | No information available |
| **Flammability (solid, gas)** | | No information available |
| **upper flammability limit** | | |
| **lower flammability limit** | | |
| **Vapor pressure** | 22 mbar @ 20 °C | No information available |
| **Vapor density** | 0.4 | No information available |
| **Specific Gravity** | 1.12 | No information available |
| **Water Solubility** | completely soluble | No information available |
| **Solubility in other solvents** | | No information available |
| **Partition coefficient: n-octanol/water** | | No information available |
| **Autoignition temperature** | | No information available |
| **Decomposition temperature** | | No information available |
| **Viscosity, kinematic** | | No information available |
| **Viscosity, dynamic** | | No information available |
| **Explosive properties** | No information available | |
| **Oxidizing Properties** | No information available | |

**Other information**

| | |
|---|---|
| **Softening point** | No information available |
| **Density VALUE** | No information available |
| **Bulk Density VALUE** | No information available |

## 10. STABILITY AND REACTIVITY

**Reactivity**
None under normal use conditions.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

**Conditions to Avoid**
Heat, flames and sparks.

**Incompatible Materials**
Acids. Sodium hypochlorite. Strong bases. Oxidizing agents. Halogenated compounds. Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

**Hazardous Decomposition Products**
Ammonia. Chloramine. Sulfur oxides. Nitrogen oxides (NOx). Cyanides. Carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Harmful by inhalation. Irritating to respiratory system. Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. If hydrogen cyanide gas is liberated due to contact with a strong oxidizer or acid, it may cause dizziness, headache, rapid respiration, rapid pulse, unconsciousness, convulsions and death. Contact with strong acids liberates sulfur dioxide. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

**Eye contact** Irritating to eyes.

**Skin contact** Harmful in contact with skin. Irritating to skin.

**Ingestion** Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Toxicology data for the components**

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ammonium thiocyanate<br>1762-95-4 | 500 mg/kg ( Rat )<br>Oral LD50 Rat 500 mg/kg (Source: IUCLID) | - | - |
| Ammonium thiosulfate<br>7783-18-8 | > 2000 mg/kg ( Rat ) | - | - |
| Sodium bisulfite<br>7631-90-5 | 1420 mg/kg ( Rat ) | - | - |

| Chemical Name | Other applicable information |
|---|---|
| Ammonium thiocyanate | Moderate eye irritation<br>Moderate skin irritation<br>Overexposure to thiocyanates has been shown to cause thyroid enlargement, decrease in metabolic rate, and symptoms of hypothyroidism in humans and animals.<br>Hydrogen cyanide gas may be liberated upon contact with strong oxidizers or acids. Hydrogen cyanide gas may cause dizziness, headache, rapid respiration, rapid pulse, unconsciousness, convulsions and death. |

**Information on toxicological effects**

**Symptoms** Irritant. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Irritating to eyes and skin.
**Sensitization** May cause sensitization of susceptible persons.
**mutagenic effects** No information available.
**Carcinogenicity** Contains no ingredient listed as a carcinogen.
**Reproductive toxicity** No information available.
**STOT - single exposure** No information available
**STOT - repeated exposure** No information available

| | |
|---|---|
| **Chronic toxicity** | May cause adverse thyroid effects. AMMONIUM THIOCYANATE: Overexposure to thiocyanates has been shown to cause thyroid enlargement, decrease in metabolic rate, and symptoms of hypothyroidism in humans and animals. |
| **Subchronic toxicity** | No information available. |
| **Target Organ Effects** | Eyes, Skin, Respiratory system, Thyroid, Central nervous system. |
| **Other adverse effects** | May cause adverse thyroid effects. Overexposure to thiocyanates has been shown to cause thyroid enlargement, decrease in metabolic rate, and symptoms of hypothyroidism in humans and animals. |
| **Aspiration Hazard** | No information available. |

**Numerical measures of toxicity - Product Information**

**Unknown acute toxicity**
**The following values are calculated based on chapter 3.1 of the GHS document** .
**ATEmix (oral)** 1741 mg/kg (ATE)

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates |
|---|---|---|---|---|
| Sodium bisulfite 7631-90-5 | | | | 119: 48 h Daphnia magna mg/L EC50 |

**Persistence and degradability**
Expected to be readily biodegradable.

**Bioaccumulation:**
No information available.

**Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste Disposal Methods** Dispose of in accordance with local regulations.

**Contaminated packaging** Do not re-use empty containers. Dispose of in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

**DOT** Not regulated

**TDG** Not regulated

**ICAO/IATA** Not regulated

**IMDG/IMO** Not regulated

For transportation information, go to: http://ship.carestreamhealth.com.

## 15. REGULATORY INFORMATION

### International Inventories

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **EINECS/ELINCS** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL** | Complies |
| **PICCS** | Complies |
| **AICS** | Complies |
| **NZIoC** | Complies |

**Legend**

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

### U.S. Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical Name | SARA 313 - Threshold Values % |
|---|---|
| Ammonium thiocyanate - 1762-95-4 | 1.0 |
| Ammonium thiosulfate - 7783-18-8 | 1.0 |
| Ammonium bisulfite - 10192-30-0 | 1.0 |

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute Health Hazard** | Yes |
| **Chronic Health Hazard** | Yes |
| **Fire Hazard** | No |
| **Sudden Release of Pressure Hazard** | No |
| **Reactive Hazard** | Yes |

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|---|---|---|---|
| Ammonium thiocyanate | 5000 lb | | | X |
| Sodium bisulfite | 5000 lb | | | X |
| Ammonium bisulfite | 5000 lb | | | X |

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | SARA Product RQ |
|---|---|---|---|
| Ammonium thiocyanate | 5000 lb | | |
| Sodium bisulfite | 5000 lb | | |
| Ammonium bisulfite | 5000 lb | | |

**TSCA**

| Chemical Name | U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping |
|---|---|
| Sodium bisulfite | PAIR: 01/26/1994 |

| Component | U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances |
|---|---|
| Sodium bisulfite<br>7631-90-5 ( 0.1 - 1 ) | 01/26/1994 |

## U.S. State Regulations

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---|---|---|---|---|
| Ammonium thiocyanate | X | X | X | X | X |
| Ammonium thiosulfate | X | | X | | |
| Sodium bisulfite | X | X | X | | X |
| Ammonium bisulfite | X | X | X | | |

## International Regulations

**Mexico - Grade** Moderate risk, Grade 2

| Chemical Name | Carcinogen Status | Exposure Limits |
|---|---|---|
| Ammonium thiocyanate | | Mexico: TWA 5 mg/m$^3$ |

| Component | Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities | Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities |
|---|---|---|
| Ammonium thiocyanate<br>1762-95-4 ( 25 - 30 ) | 100<br>5000 kg/yr | 100 kg/yr |

## 16. OTHER INFORMATION

| | | | |
|---|---|---|---|
| **NFPA** | **Health Hazard** 4 | **Flammability** 1 | **Instability** 0 |
| **HMIS** | **Health Hazard** 2* | **Flammability** 1 | **Physical Hazard** 1 |

**Revision Date** 2014-03-28
**Revision Note** Update to OSHA GHS SDS format

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**