Carestream

# SAFETY DATA SHEET

**Issuing date** no data available **Revision Date** 2013-03-13 **Version** 1

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

**Product name:** INDUSTREX Single Part Developer Replenisher

**Product code:** 1043017

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

For Emergency Health Information call: 800-424-9300

For other information contact: 800-328-2910

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

## 2. HAZARDS IDENTIFICATION

### Classification

| | |
|---|---|
| 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 serious eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer
May be corrosive to metals

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

**Precautionary Statements - Prevention**
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep only in original container
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection
Use personal protective equipment as required

**Precautionary Statement - Response**
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
**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: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
**Spill**
Absorb spillage to prevent material damage

**Precautionary Statement - Storage**
Store locked up
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)**
• Very toxic to aquatic life
• May be harmful if swallowed
•

**Other information**
No information available

## 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 | 10-20 | * |
| Hydroquinone<br>123-31-9 | 123-31-9 | 5-10 | * |
| Potassium carbonate<br>584-08-7 | 584-08-7 | 1-5 | * |
| Sodium bromide<br>7647-15-6 | 7647-15-6 | 1-5 | * |
| Glycine,<br>N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-,<br>pentasodium salt<br>140-01-2 | 140-01-2 | 1-5 | * |
| 3-Pyrazolidinone,<br>4-(hydroxymethyl)-4-methyl-1-phenyl-<br>13047-13-7 | 13047-13-7 | 0.1-1.0 | * |

*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** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. 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.

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

**Main Symptoms** Irritation. May cause an allergic skin reaction.

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

**Notes to physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Carbon dioxide ($CO_2$). Dry chemical. Foam.

**Unsuitable Extinguishing Media**
None.

**Specific hazards arising from the chemical**
No information available.

**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** 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. 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** Oxidizing agents. Strong acids.

## 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 | |

**Appropriate engineering controls**

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

**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.

**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** When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL AND CHEMICAL PROPERTIES**

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

| **Property** | **Values** | **Remarks/ • Method** |
|---|---|---|
| **ph** | 10.7 | No information available |
| **Melting point/range:** | | No information available |
| **Boiling point/boiling range** | 100 °C | No information available |
| **Flash Point** | > 93.4 °C | No information available. |
| **Evaporation rate** | | No information available |
| **Flammability (solid, gas)** | | |
| **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**
Oxidizing agents. Strong acids.

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

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Inhalation** No hazard from product as supplied. May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide.

**Eye contact** Causes eye irritation.

**Skin contact** May cause skin irritation and/or dermatitis. Prolonged or repeated contact may dry skin and cause irritation.

**Ingestion** May be harmful if swallowed. 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 | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Hydroquinone<br>123-31-9 | 320 mg/kg ( Rat ) | > 4800 mg/kg (Rat) | |
| Potassium carbonate<br>584-08-7 | 1870 mg/kg ( Rat ) | >2000 mg/kg ( Rabbit ) | |
| Sodium bromide<br>7647-15-6 | 3400 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | |

| Chemical Name | Other applicable information |
|---|---|
| Potassium sulfite | Mild skin irritation<br>-<br>Moderate skin irritation |
| Hydroquinone | Moderate eye irritation<br><br>Causes sensitization on guinea-pigs<br><br>Mild skin irritation<br><br>Can be absorbed through skin<br>(1.1 ug/cm2/hr)<br><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 bromide | Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk. |

**Information on toxicological effects**

**Symptoms** Irritant. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

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

**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.

**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, Reproductive system.

**Aspiration Hazard** No information available.

**Numerical measures of toxicity - Product Information**

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

**ATEmix (oral)** 4337 mg/kg

**ATEmix (dermal)** 23699 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

4.75% 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 |
|---|---|---|---|---|
| Potassium sulfite<br>10117-38-1 | | LC50 220 - 460 mg/L Leuciscus idus 96 h | | |
| Hydroquinone<br>123-31-9 | 13.5 mg/L EC50 120 h (Desmodesmus subspicatus) 0.335 mg/L EC50 72 h (Pseudokirchneriella subcapitata) | LC50= 0.044 mg/L Oncorhynchus mykiss 96 h LC50= 0.044 mg/L Pimephales promelas 96 h LC50 0.1 - 0.18 mg/L Pimephales promelas 96 h LC50= 0.17 mg/L Brachydanio rerio 96 h | | EC50 = 0.29 mg/L 48 h (Daphnia magna) |
| Sodium bromide<br>7647-15-6 | 5800 - 24000 mg/L EC50 96 h (Scenedesmus pannonicus) | LC50 24000 - 96000 mg/L Oryzias latipes 96 h LC50= 24000 mg/L Oryzias latipes 96 h LC50 16000 - 24000 mg/L Poecilia reticulata 96 h LC50= 16000 mg/L Poecilia reticulata 96 h LC50 15614 - 17428 mg/L Pimephales promelas 96 h LC50> 1000 mg/L Lepomis macrochirus 96 h LC50 0.054 - 0.081 mg/L Oncorhynchus mykiss 96 h LC50> 1000 mg/L Oncorhynchus mykiss 96 h | | EC50 5800 - 48000 mg/L 48 h (Daphnia magna) EC50 5700 - 10800 mg/L 48 h (Daphnia magna) |

| | | | | |
|---|---|---|---|---|
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt<br>140-01-2 | 2.6 mg/L EC50 72 h (Desmodesmus subspicatus) | LC50> 300 mg/L Pimephales promelas 96 h<br>LC50 1005 - 1250 mg/L Lepomis macrochirus 96 h | | EC50 > 500 mg/L 48 h (Daphnia magna) |

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

**Bioaccumulation:**
Not likely to bioaccumulate.

| Chemical Name | log Pow |
|---|---|
| Hydroquinone<br>123-31-9 | 0.5 |
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt<br>140-01-2 | -3.05 |

## 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.
**US EPA Waste Number** D002

## 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 carbonate
- **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 carbonate
- **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 carbonate |
| **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 carbonate |
| **Hazard class** | 8 |
| **Packing Group** | III |
| **EmS No.** | F-A, S-B |
| **Special Provisions** | 223, 274 |
| **Marine pollutant** | Hydroquinone |

This product meets the requirements of the limited quantity exemption. The shipping case will be marked as a limited quantity. It does not require other labeling or placarding except if transported by aircraft. For transportation information, go to: http://ship.carestreamhealth.com.

## 15. REGULATORY INFORMATION

"Does not comply" indicates a component is either not on the public inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

### International Inventories

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Does not comply |
| **EINECS/ELINCS** | Does not comply |
| **ENCS** | Complies |
| **IECSC** | Does not comply |
| **KECL** | Does not comply |
| **PICCS** | Does not comply |
| **AICS** | Complies |
| **NZIoC** | Does not comply |

**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**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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

| Chemical Name | HAPS data | VOC Chemicals | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|---|---|---|---|---|
| Hydroquinone - 123-31-9 | | Group I | | |

**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 | |

**TSCA**

| Chemical Name | U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances |
|---|---|
| Hydroquinone | 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 |

## International Regulations

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

| Chemical Name | Carcinogen Status | Exposure Limits |
|---|---|---|
| Hydroquinone | A3 | Mexico: TWA 2 mg/m$^3$ |

## 16. OTHER INFORMATION

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

**Revision Date** 2013-03-13
**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 Material Safety Data Sheet**