

SAFETY DATA SHEET

Issuing date 03/16/2016

Revision Date 03/16/2016

Version 5

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

Product name: INDUSTREX Single Part Developer Replenisher

Product code: 5315288

Supplier Carestream Health Canada, 8800 Dufferin Street, Suite 201, Vaughan, Ontario, L4K 0C5

For Emergency Health Information call: 800-424-9300

For other information contact: 1-866-792-5011

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 |

Label elements

Emergency Overview

| | | |
|---|------------------------------|----------------------|
| Signal word | Danger | |
| Hazard Statements Causes serious eye damage May cause allergic skin reaction May cause genetic defects Suspected of causing cancer | | |
|  | | |
| Appearance No information available | 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. Use personal protective equipment as required. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

Precautionary Statement - Response

IF exposed or concerned: Get medical advice/attention.

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.

Precautionary Statement - Storage

Store in a closed container.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

- Not applicable

Other Information

May be harmful if swallowed. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | Weight % | Trade Secret |
|---|------------|----------|--------------|
| Water 7732-18-5 | 7732-18-5 | >60 | * |
| Potassium sulfite 10117-38-1 | 10117-38-1 | 10-20 | * |
| Hydroquinone 123-31-9 | 123-31-9 | 3-6 | * |
| Diethylene glycol 111-46-6 | 111-46-6 | <5 | * |
| Potassium carbonate 584-08-7 | 584-08-7 | 1-5 | * |
| Sodium bromide 7647-15-6 | 7647-15-6 | 1-5 | * |
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2 | 140-01-2 | 1-5 | * |

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

4. FIRST AID MEASURES

First Aid Measures**General advice**

Show this material safety data sheet to the doctor in attendance. If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact

Keep eye wide open while rinsing. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician. Immediate medical attention is not required. May cause an allergic skin reaction.

Inhalation

Move to fresh air. Consult a physician. Immediate medical attention is not required. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician. Rinse mouth. Clean mouth with water. Never give anything by mouth to an unconscious person.

Consult a physician.

Protection of First-aiders Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Main Symptoms May cause an allergic skin reaction. Causes serious eye irritation. Irritation.

Indication of any immediate medical attention and special treatment needed

Notes to physician May cause sensitization of susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Cool containers / tanks with water spray. Carbon dioxide (CO₂). Dry chemical. Foam.

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 gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.

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. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Try to prevent the material from entering drains or water courses. Do not allow material to contaminate ground water system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevention of fire and explosion. Recover the product in solid form, if possible.

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. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Use only in area provided with appropriate exhaust ventilation. Avoid breathing vapors or mists. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep away from direct sunlight. 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/m ³ | | TWA: 2 mg/m ³ | |
| Diethylene glycol 111-46-6 | - | TWA: 10 mg/m ³ | - | |

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 Tightly fitting safety goggles. Face-shield.

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 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 | Odor | Odorless |
| Appearance | No information available | Odor Threshold | No information available |
| Color | colorless light yellow | | |
| Property | Values | Remarks/ • Method | |
| ph | 10.8 | No information available | |
| Melting point/range: | | No information available | |
| Boiling point/boiling range | | 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 | | No information available |
| Vapor density | | No information available |
| Specific Gravity | 1.271 | 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 |
| Oxidizing Properties | No information available | No information available |
| Explosive properties | No information available | No information available |
| Other information | | No information available |
| Softening point | | No information available |
| Molecular Weight | No information available | No information available |
| Density | | No information available |
| Bulk Density: | | No information available |

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

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. To avoid thermal decomposition, do not overheat.

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 | Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide. |
| Eye contact | Causes serious eye irritation. |
| Skin contact | Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Avoid contact with skin. Irritating to skin. |
| 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 | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------|----------------------|-------------|-----------------|
| Water 7732-18-5 | 90,000 mg/kg (Rat) | - | - |
| Potassium sulfite | >3200 mg/kg (rat) | - | - |

| | | | |
|--|---|-------------------------|---|
| 10117-38-1 | | | |
| Hydroquinone 123-31-9 | 298 mg/kg (Rat) Oral LD50 Rat 298 mg/kg (Source: JAPAN_GHS) | > 4800 mg/kg (Rat) | - |
| Diethylene glycol 111-46-6 | 12565 mg/kg (Rat) | 11890 mg/kg (Rabbit) | - |
| Potassium carbonate 584-08-7 | > 2000 mg/kg (Rat) Oral LD50 Rat 2000 mg/kg (Source: ECHA) | >2000 mg/kg (Rabbit) | - |
| Sodium bromide 7647-15-6 | 3500 mg/kg (Rat) Oral LD50 Rat 3500 mg/kg (Source: NLM_CIP) | > 2000 mg/kg (Rabbit) | - |
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2 | > 5000 mg/kg (rat) | > 2000 mg/kg | - |
| 3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-pheny l- 13047-13-7 | 566 mg/kg (Rat) Oral LD50 Rat 566 mg/kg (Source: NLM_CIP) | - | - |
| Pentanoic acid, 5,5'-(dithiobis(4,1-phenyleneimino)) bis(5-oxo- 208471-42-5 | > 2000 mg/kg (Rat) | - | - |
| Toltriazole 136-85-6 | 1600 mg/kg (Rat) Oral LD50 Rat 1600 mg/kg (Source: NLM_CIP) | - | - |
| 5H-Tetrazole-5-thione, 1,2-dihydro-1-phenyl- 86-93-1 | >5000 mg/kg (Rat) 1750 mg/kg (Mouse) | - | - |

| Chemical Name | Other applicable information |
|-------------------|---|
| Potassium sulfite | Moderate skin irritation |
| Hydroquinone | Moderate eye irritation Causes sensitization on guinea-pigs. Mild skin irritation Can be absorbed through skin. (1.1 ug/cm2/hr) Negative in bacterial mutagenicity assays. Evidence for mutagenicity (chromosome breakage, sister-chromatid exchanges) in in vivo and in vitro animal studies. 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. |
| Diethylene glycol | Mild skin irritation Mild eye irritation Can cause kidney damage and CNS effects following ingestion. Repeated oral exposure to high doses can cause liver damage. |
| 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. |
| 3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-phenyl- | Mild skin irritation Skin Sensitization Slight Eye Irritation Strong Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects. |

Information on toxicological effects

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

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

Sensitization May cause sensitization by skin contact.

mutagenic effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

Reproductive toxicity No information available.

STOT - single exposure No information available

STOT - repeated exposure No information available

Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Target Organ Effects Central nervous system, Respiratory system, Eyes, Skin.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 0% 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) 3076 mg/kg

ATEmix (dermal) 7166 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life

3.743% of the mixture consists of component(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 10117-38-1 | | 220 - 460: 96 h Leuciscus idus mg/L LC50 static | | |
| Hydroquinone 123-31-9 | 0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus 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 |
| Diethylene glycol 111-46-6 | | 75200: 96 h Pimephales promelas mg/L LC50 flow-through | | 84000: 48 h Daphnia magna mg/L EC50 |

| | | | | |
|---|---|--|--|--|
| Potassium carbonate 584-08-7 | | | | 440 - 880: <24 h Daphnia magna mg/L LC50 |
| Sodium bromide 7647-15-6 | 5800 - 24000: 96 h Scenedesmus pannonicus mg/L EC50 | 15614 - 17428: 96 h Pimephales promelas mg/L LC50 static 16000 - 24000: 96 h Poecilia reticulata mg/L LC50 flow-through 24000 - 96000: 96 h Oryzias latipes mg/L LC50 flow-through 16000: 96 h Poecilia reticulata mg/L LC50 semi-static 24000: 96 h Oryzias latipes mg/L LC50 semi-static 1000: 96 h Lepomis macrochirus mg/L LC50 static 1000: 96 h Oncorhynchus mykiss mg/L LC50 static | | 5700 - 10800: 48 h Daphnia magna mg/L EC50 Static 5800 - 48000: 48 h Daphnia magna mg/L EC50 |
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2 | 2.6: 72 h Desmodemus 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 |
| Pentanoic acid, 5,5'-(dithiobis(4,1-phenyleneimino))bis(5-oxo-208471-42-5 | | 10-100 mg/l (estimated) | | 10-100 mg/L (estimated) |

Persistence and degradability

No information available.

Bioaccumulation:

Not likely to bioaccumulate.

| Chemical Name | log Pow |
|---|---------|
| Hydroquinone 123-31-9 | 0.5 |
| Diethylene glycol 111-46-6 | -1.98 |
| Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2 | -3.05 |

13. DISPOSAL CONSIDERATIONS**Waste Disposal Methods**

Should not be released into the environment. Dispose of in accordance with local regulations. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated packaging

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

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 | POTASSIUM CARBONATE |
| Hazard class | 8 |

| | |
|--|---|
| Packing Group | III |
| Special Provisions | IB3, T7, TP1, TP28 |
| Emergency Response Guide Number | 154 |
| Description | UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM CARBONATE), 8, III, Limited Quantity |

TDG

| | |
|-----------------------------|--|
| UN/ID No | UN3266 |
| Proper Shipping Name | Corrosive liquid, basic, inorganic, n.o.s. |
| Technical Name | POTASSIUM CARBONATE |
| Hazard class | 8 |
| Packing Group | III |
| Description | UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM CARBONATE), 8, III , Limited Quantity |

ICAO/IATA

| | |
|-----------------------------|--|
| UN/ID No | UN3266 |
| Proper Shipping Name | Corrosive liquid, basic, inorganic, n.o.s. |
| Technical Name | POTASSIUM CARBONATE |
| Hazard class | 8 |
| Packing Group | III |
| ERG Code | 8L |
| Special Provisions | A3, A803 |
| Description | UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM CARBONATE), 8, III , Limited Quantity |

IMDG/IMO

| | |
|-----------------------------|--|
| UN/ID No | UN3266 |
| Proper Shipping Name | Corrosive liquid, basic, inorganic, n.o.s. |
| Technical Name | POTASSIUM CARBONATE |
| Hazard class | 8 |
| Packing Group | III |
| EmS No. | F-A, S-B |
| Special Provisions | 223, 274 |
| Description | UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM CARBONATE), 8, III , Limited Quantity |

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

15. REGULATORY INFORMATION
International Inventories

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

16. OTHER INFORMATION

Revision Date

03/16/2016

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