Carestream

MATERIAL SAFETY DATA SHEET

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

Identification of the substance or mixture

Product name: INDUSTREX LO Fixer and Replenisher

Product code: 6620033
Pure substance/mixture Mixture

Use of the Substance/Mixture

Product Use: Restricted to professional users, Photographic chemical.

Company/Undertaking Identification

Supplier Carestream Health Japan Co., Ltd., 2-27-1 Shinkawa, Chuo-ku, Tokyo, Japan

For further information, please contact:
For environment, health and safety information, email: WW-EHS@carestreamhealth.com

Emergency telephone

Emergency telephone +(81)-345209637

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

This material is not classified as hazardous according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

GHS Label elements, including precautionary statements

This material is not classified as hazardous according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Other hazards which do not result in classification

General Hazards
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	40-50
Ammonium thiosulfate	30-40
Sodium bisulfite	1-5
Ammonium bisulfite	1-5
Potassium acetate	1-5

Ammonium acetate	1-5
Sodium borate	1-2
Aluminum sulfate	1-5

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Main Symptoms None known.

Eye contact In case of contact, immediately flush eyes with plenty of water. Get medical attention immediately if symptoms occur.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Eye contact May cause eye irritation.

Inhalation Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. Contact with strong acids liberates sulfur dioxide. May cause irritation of respiratory tract.

Ingestion May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Extinguishing media which shall not be used for safety reasons None known based on information supplied.

Specific hazards arising from the chemical

Special Hazard	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).

Special protective actions for fire-fighters

Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

Other information

Other information	None known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8. Ensure adequate ventilation.

Environmental precautions

Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.
Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Other information

See Section 12 for additional Ecological information.

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.
Prevention of fire and explosion	Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep container tightly closed in a dry and well-ventilated place.
Materials to Avoid	Acids. Strong bases. Sodium hypochlorite. Halogenated compounds. Contact with strong acids liberates sulfur dioxide. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits Ingredients with workplace control parameters

Chemical Name	Japan	European Union	ACGIH TLV
Sodium bisulfite			TWA: 5 mg/m³
Sodium borate			STEL 6 mg/m³ TWA: 2 mg/m³

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Personal Protective Equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection None under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Eye Protection Safety glasses with side-shields.

Skin and body protection Wear protective gloves/ protective clothing.

Hand Protection Protective gloves

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 4.9
Flash point: Does not flash
Boiling point/boiling range > 100 °C

Odor Ammonia
Color colorless
Autoignition temperature: No information available

Vapor Pressure 24 mbar @ 20 °C
Vapor density 0.6
Density No information available
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity 1.30
Bulk Density: No information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with bases liberates flammable material and ammonia.

Conditions to Avoid

Do not freeze.

Materials to Avoid

Acids. Strong bases. Sodium hypochlorite. Halogenated compounds. Contact with strong acids liberates sulfur dioxide. Oxidizing agents.

Hazardous Decomposition Products

Ammonia. Chloramine. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Eye contact May cause eye irritation.
Inhalation Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. Contact with strong acids liberates sulfur dioxide. May cause irritation of respiratory tract.
Ingestion May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
Oral 4,413.31 mg/kg
Dermal 59,282.35 mg/kg
Inhalation
Gas No information available
Mist No information available
Vapor No information available

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		
Sodium bisulfite	1420 mg/kg (Rat)		
Potassium acetate	3250 mg/kg (Rat)		
Sodium borate	2403 mg/kg (Rat)	2000 mg/kg (Rabbit)	
Aluminum sulfate	> 5000 mg/kg (Rat)		

Chemical Name	Other applicable information
Ammonium thiosulfate	No skin irritation No eye irritation
Sodium bisulfite	No skin irritation No eye irritation
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.

Aluminum sulfate	Severe eye irritation No skin irritation Cell transformation assay: negative Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Aggravated Medical Conditions None known.

Subchronic toxicity

Chronic toxicity

Chronic toxicity Prolonged exposure may cause chronic effects.
Sensitization No information available.
Neurological effects No information available.
Target Organ Effects Eyes, Skin, Respiratory system.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity Contains a known or suspected reproductive toxin

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

Acute aquatic toxicity Product Information
No information available

Acute aquatic toxicity Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium bisulfite		LC50= 240 mg/L Gambusia affinis 96 h	EC50 = 119 mg/L 48 h (Daphnia magna)
Potassium acetate		LC50= 6800 mg/L Oncorhynchus mykiss 96 h	EC50 = 7170 mg/L 24 h (Daphnia magna)
Sodium borate	158 mg/L EC50 96 h (Desmodesmus subspicatus) 2.6 - 21.8 mg/L EC50 96 h (Pseudokirchneriella subcapitata)	LC50= 340 mg/L Limanda limanda 96 h	LC50 1085 - 1402 mg/L 48 h (Daphnia magna)
Aluminum sulfate		LC50= 100 mg/L Carassius auratus 96 h LC50= 37 mg/L Gambusia affinis 96 h	EC50 = 136 mg/L 15 min (Daphnia magna)

Persistence and degradability
Expected to be readily biodegradable

Bioaccumulative potential
No information available

Mobility in soil
No information available

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products Dispose of in accordance with local regulations.

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.

ADR/RID Not regulated

IMDG/IMO Not regulated

ICAO/IATA Not regulated

ADN Not regulated

DOT Not regulated

TDG Not regulated

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

15. REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	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

National regulatory information

Chemical Name	Law on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc.	Pollution Release and Transfer Registry (Class I):	Pollution Release and Transfer Registry (Class II):
Sodium borate		405	not applicable

Industrial Safety and Health Law:

Chemical Name	Dangerous Substances	organic solvent	Harmful Substances Whose Names Are to be Indicated on the Label	Biological monitoring
Sodium bisulfite	>0.1 %	not applicable	not applicable	
Sodium borate	>0.1 %	not applicable	not applicable	
Aluminum sulfate	>1 %	not applicable	not applicable	

Fire Service Law:

16. OTHER INFORMATION

Revision Date 2013-03-13
Revision Note Product name, (M)SDS sections updated

Disclaimer

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text

End of Material Safety Data Sheet