SAFETY DATA SHEET

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

Identification of the substance or mixture

Product name: Rapid Access Fixer
Product code: 4980512FIX
Pure substance/mixture Mixture

Use of the Substance/Mixture

Product Use: Photographic chemical. Restricted to professional users.

Company/Undertaking Identification

Supplier: Carestream Health Taiwan Limited, 4F-1, No. 129, Sec.2, Zhongshan N. Rd., Zhongshan Dist., Taipei, 10448,Taiwan R.O.C.

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

Emergency telephone

00801-14-8954

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

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
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

GHS Label elements, including precautionary statements

Warning

hazard statements
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H320 - Causes eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P362 - Take off contaminated clothing and wash before reuse
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

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 acids liberates very toxic gas.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	60 - 65
Ammonium thiocyanate	25 - 30
Ammonium thiosulfate	10 - 15
Sodium bisulfite	0.1 - 1
Ammonium bisulfite	0.1 - 1

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. 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.

Main Symptoms

Hives
Itching
Rashes
Difficulty breathing
Coughing and/ or wheezing

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.
Protection of First-aiders	Use personal protective equipment.

Most important symptoms/effects, acute and delayed

Skin contact	Harmful in contact with skin. Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Eye contact	Irritating to eyes.
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.
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.

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

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

Suitable Extinguishing Media	Dry chemical, CO_2, alcohol-resistant foam or water spray.
Extinguishing media which shall not be used for safety reasons	Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Special Hazard	Thermal decomposition can lead to release of toxic and corrosive gases/vapors. 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 Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. For personal protection see section 8.

Advice for emergency responders
For personal protection see section 8

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

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. 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.

Materials to Avoid Acids. Sodium hypochlorite. Strong bases. Strong 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 limits

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Ammonium thiocyanate	S* STEL 10 mg/m³	Ceiling 1 mg/m³		
Sodium bisulfite	STEL 10 mg/m³		TWA: 5 mg/m³	

Biological standards

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

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 In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

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

Skin and body protection Wear suitable protective clothing.

Hand Protection Impervious gloves

Hygiene measures When using, do not eat, drink or smoke. Wear suitable gloves and eye/face protection. Wash hands before breaks and at the end of workday. Wash hands with water as a precaution. Regular cleaning of equipment, work area and clothing is recommended. Avoid breathing vapors, mist or gas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 5.4
Flash point: Does not flash
Boiling point/boiling range > 100 °C / 212 °F

Odor Odorless
Color clear colorless
Autoignition temperature: No information available

Vapor Pressure 22 mbar @ 20 °C
Vapor density 0.4
Density No information available
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity 1.12
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 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. Take precautionary measures against static discharges.

Materials to Avoid

Acids. Sodium hypochlorite. Strong bases. Strong 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

Acute toxicity Product Information.

Skin contact	Harmful in contact with skin. Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Eye contact	Irritating to eyes.
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.
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.

Oral	1,741.00 mg/kg ATEmix
Dermal	No information available
Inhalation	
Gas	No information available
Mist	No information available
Vapor	No information available

Acute toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	90,000 mg/kg (Rat)		

Ammonium thiocyanate	500 mg/kg (Rat) Oral LD50 Rat 500 mg/kg (Source: IUCLID)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		
Sodium bisulfite	1420 mg/kg (Rat)		

Chemical Name	Other applicable information
Ammonium thiocyanate	Moderate eye irritation Moderate skin irritation Overexposure to thiocyanates has been shown to cause thyroid enlargement, decrease in metabolic rate, and symptoms of hypothyroidism in humans and animals. 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.

Aggravated Medical Conditions None known.

Subchronic toxicity

No information available

Chronic toxicity

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.

Sensitization May cause sensitization of susceptible persons.

Neurological effects 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.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product contains an ingredient that is classified, according to European regulations, as "harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Acute aquatic toxicity Product Information

No information available

Acute aquatic toxicity Component Information

No information available

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium bisulfite			119: 48 h Daphnia magna mg/L EC50

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
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

16. OTHER INFORMATION

Revision Date	2014-03-28
Revision Note	(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 Safety Data Sheet