

CHEMICAL EQUIPMENT LABS, INC
COMPOUND 400A
Safety Data Sheet (SDS)

Section 1: Identification of the substance/mixture and of the company/undertaking

PRODUCT IDENTIFIER

Product name: Compound 400A

Product form: Mixture

Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/corrosion control

Details of the supplier of the safety data sheet

Name/Address: Chemical Equipment Labs, INC
PO Box 1136
Linwood, PA 19061

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EMERGENCY TELEPHONE NUMBER

CHEMTREC (800) 424-9300

Section 2: HAZARD(S) IDENTIFICATION

Emergency overview

Form : liquid
Color : clear to yellow
Odor : characteristic

Warning statements

Danger! Causes eye burns. Corrosive to mild steel

Potential Health Effects

Likely routes of exposure : eye and skin contact
Eye contact : Causes eye burns. Injury may be permanent.
Skin contact : No more than slightly irritating to skin. No more slightly toxic if absorbed.
Inhalation : No information available.

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By Chemical Equipment Labs, INC
September 15, 2016

Ingestion : No more than slightly toxic if swallowed. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

NAME	PRODUCT IDENTIFER	%
1-hydroxy ethylidene-1, 1-diphosphonic acid	(CAS No) 2809-21-4	Proprietary
Phosphonic acid	(CAS No) 13598-36-2	Proprietary
Water	(CAS No) 7732-18-5	Proprietary

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

Section 4: FIRST-AID MEASURES

Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to unconscious person.

First aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.

First- aid measures after skin contact : IF ON SKIN (or clothing): Removed affected clothing and wash all exposed skin with water for at least 15 minutes. Get medical attention immediately.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

Section 5: FIRE FIGHTING MEASURES

Flash point : Nonflammable aqueous solution

Hazardous products of combustion : Carbon monoxide (CO); carbon dioxide; phosphines

Extinguishing media : Water spray, foam, dry chemical, or carbon dioxide

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Unusual fire and explosion hazards : Firefighters, and others exposed, wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions : Use personal protection recommended in Section 8.
Environmental precautions : Keep out of a drains and water courses.
Methods for cleaning up : Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Neutralize washings with soda ash or lime. Flush spill area with water.

Refer to Section 13 for disposal information and Section 14 and 15 for reportable quantity information.

Section 7: HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Emptied containers retain vapor and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed. The reuse of this material's container for no industrial purpose is prohibited and any reuse must be in consideration of the data provided in this safety data sheet.

Storage

Temperature : >0°C
Suitable materials of construction : Glass lining; PVC; polypropylene; glass reinforced plastic; polyethylene
Unsuitable materials of construction : mild steel; carbon steel; aluminum; other metals
General : Freeze sensitive. Keep in a cool dry, well ventilated place. Stable under normal conditions of handling and storage.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS

Hand protection : Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.
Eye protection : Wear chemical goggles. Have eye wash facilities immediately available at any location where eye contact can occur.

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Skin and body protection	: Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wash thoroughly after handling.
Respiratory protection	: Avoid breathing vapor or mist. Use approved respiratory protection equipment when airborne exposure is excessive. If used, full face piece replaces the need for face shield and/or goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations, specified by manufacturer.
Ventilation	: provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.
Airborne exposure limits	(ml/m ³ = ppm)
No specific occupational exposure limit has been established.	

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity	: 1.45 @ 20°C
pH	: <2.0 conditions 10g/l @ 25°C
Freezing point	: -25°C
Water solubility	: completely miscible
Viscosity	: 46.0 mPa.s @ 20°C 20.2 mPa.s @ 40°C 10.3 mPa.s @ 60°C 5.0 mPa.s @ 90°C

Section 10: STABILITY AND REACTIVITY

Conditions to avoid	: Do not expose to extreme temperatures.
Materials to avoid	: Attacks many metals.
Hazardous reactions	: Corrosive to aluminum and mild steel. Contact with strong oxidizing agents Contact with strong bases. Hazardous polymerization does not occur.
Hazardous decomposition products	: carbon monoxide (CO); carbon dioxide; phosphorus oxides (pXO _y); phosphines

Section 11: TOXICOLOGICAL INFORMATION

Acute animal toxicity data

Oral	: LD50, rat, 2,400 mg/kg, slightly toxic following oral administration
Dermal	: LD50, rabbit, 7940 mg/kg, practically nontoxic after skin application in animal studies.
Eye irritation	: rabbit, corrosive.
Skin irritation	: rabbit, practically none irritating to skin (rabbit). 24 h

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Repeat dose toxicity	: rat & dog, diet, chronic, minor effects (less than lesions) were present in some animals at the end of the observation period.
Repeat dose toxicity	: rat & dog, diet, chronic, minor effects (less than lesions) were present in some animals at the end of the observation period.
Repeat dose toxicity	: dog, subcutaneous, chronic, adverse effects observed in repeat dose studies.
Target organs affected	: bones
Developmental toxicity	: rat & rabbit, gavage, No birth defects were noted in rats given the active ingredient orally during pregnancy.
Reproductive toxicity	: rat, diet, 2 generation, this material had no effect on reproduction or fertility.
Mutagenicity	: No genetic effects were observed in standard tests using bacterial and animal cells.

Components

Data from Solutia studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Hazardous Products Act are discussed below.

1-hydroxy ethylidene-1, 1-diphosphonic acid	: Slightly toxic following oral administration : Practically nontoxic after skin application in animal studies. Corrosive to eyes (rabbit). Practically none irritating to skin (rabbit). Slight effects on bone mineralization were noted following subcutaneous injection. No birth defects were noted in rats given the active ingredient orally during pregnancy. This material had no effect on reproduction or fertility. No genetic effects were observed in standard tests using bacterial and animal cells.
Phosphonic acid	slightly toxic following oral administration. Slightly toxic after skin application in animal studies. Corrosive to eyes (rabbit). Corrosive to skin (rabbit). The weight of the evidence indicates that this material is not mutagenic in in-vitro assays.

Section 12: ECOLOGICAL INFORMATION

Environmental Toxicity

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Invertebrates : 48 h, EC50 Water Flea (*Daphnia magna*) 527 mg/l
Fish : 96 h LC50 Rainbow trout (*Oncorhynchus mykiss*) 368 mg/l
96 h LC50 Bluegill sunfish (*Lepomis macrochirus*) 868 mg/l
Algae : 96 h EC50 Algae 7.2 mg/l
Algal growth inhibition is due to ability of this product to complex materials no to toxicity per se.

Environmental Fate

Biodegradation : Zhan-Wellens Dissolved Organic Carbon removed 33% 28 d
Modified OECD Screening theoretical CO₂ evolution 2% 70 d
Modified SCAS Dissolved Organic Carbon removed 90%
Closed Bottle BOD₃₀/COD 5%
Degrades after acclimatization

Bio concentration factor : not expected to bio accumulate.

Section 13: DISPOSAL CONSIDERATIONS

US EPA RCRC Status : This material when discarded is a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA). 40 CFR 261. See disposal considerations below for U.S. EPA disposal requirements. Consult regulatory officials for performance standards.

US EPA RCRA hazardous waste number : D002 Compound/Characteristics : Corrosively

Disposal considerations : Deactivation consult 40 CFR 286.48 for concentration based standards.

Miscellaneous advice : Local, state, provincial, and nation disposal regulations may be more or less stringent. Consult your attorney or appropriate regulatory officials for information on such disposal. This product should not be dumped, spilled, rinsed or wasted into sewers or public waterways.

Section 14: TRASPOT INFORMATION

The data provided in the section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

US DOT

Proper shipping name : Corrosive Liquid, Acidic, Organic, N.O.S. *phosphonic acid*
Hazard class : 8
Hazard identification number : UN3265

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Packing group : Packing group III
Transport label : Corrosive

Canadian TDG

Proper shipping name : Corrosive Liquid, Acidic, Organic, N.O.S. *phosphonic acid*
Hazard class : 8
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Packing group : Packing group III
Transport label : Corrosive

ICAO/IATA Class

Other : See DOT information

Section 15: REGULATORY INFORMATION

All components are in compliance with the following inventories : U.S. TSCA Canadian DSL, EU EINECS, Australian, AICS, Korean, Japanese ENCS, Philippine PICCS, and Chinese
Canadian WHMIS classification : D2 (B) – Materials causing other toxic effects
E – Corrosive material

SARA Hazard notification

Hazard Categories under Title III Rules (40 CFR 370) : Immediate

Section 302 Extremely hazardous substance

Section 313 Toxic Chemical(s)

CERCLA Reportable Quantity

Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the SDS contains all the information required by the Canadian Controlled Products Regulation.

Section 16: OTHER INFORMATION

Indication of changes : Revision 2.0
Revision date : September 15, 2016
Other information : ERM

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Product use : Cleaning/washing agents and disinfectants, complexing agents, Corrosion inhibitors, Cosmetics, Pharmaceuticals, Scale inhibition.

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	3	1	1	
Suggested HMIS Rating	3	1	1	H

NOTE TO EMPLOYER

This Safety Data Sheet contains environmental, health and toxicology information for your employees. Please ensure this information is provided to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this SDS must be given to the buyer or the information incorporated in your SDS. Discard any previous edition of this SDS.

DISCLAIMER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, Chemical Equipment Labs, LLC makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for the reliance thereon. Chemical Equipment Labs, LLC assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet