



FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL: 1-800-654-6911 (OUTSIDE USA: 1-423-780-2970)  
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®: 1-800-424-9300 (OUTSIDE USA: 1-703-527-3887)  
FOR ALL SDS QUESTIONS & REQUESTS, CALL: 1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

**PRODUCT NAME: HTH Metal and Stain Defense**

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Arch Chemicals, Inc.</b> 1200 Bluegrass Lakes Parkway Alpharetta, GA 30004	REVISION DATE:	05/27/2015
	SUPERCEDES:	07/21/2009
	MSDS Number:	000000023317
	SYNONYMS:	Stain and Scale Controller
	CHEMICAL FAMILY:	Phosphonate
	DESCRIPTION / USE	Stain and Scale Remover for swimming pools
	FORMULA:	NOT APPLICABLE/MIXTURE

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Corrosive to metals : Category 1  
Skin irritation : Category 2  
Serious eye damage : Category 1  
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

### GHS Label element

Hazard pictograms :  

Signal word : Danger

Hazard statements : H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.



Precautionary statements : **Prevention:**  
P234 Keep only in original container.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear eye protection/ face protection.  
P280 Wear protective gloves.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305 + P351 + P338 + P310 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.  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P390 Absorb spillage to prevent material damage.  
**Storage:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
ETIDRONIC ACID	2809-21-4	20 - 30
PHOSPHOROUS ACID	10294-56-1	1 - 2

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**SECTION 4. FIRST AID MEASURES**



Inhalation: IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.

Skin Contact: IF ON SKIN: Immediately flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and laundered before re-use. Seek medical attention if irritation develops.

Eye Contact: IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.

Ingestion: IF SWALLOWED: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

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## SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Product is not known to be flammable, combustible, pyrophoric or explosive.

### Flammable Properties

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Fire / Explosion Hazards: This material is not expected to burn unless all the water is boiled away. The remaining compounds may be ignitable.

Extinguishing Media: Choose extinguishing media suitable for surrounding materials.

Fire Fighting Instructions: In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide

Upper Flammable / Explosive Limit, % in air: Not applicable

Lower Flammable / Explosive Limit, % in air: Not applicable

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

### Spill Mitigation Procedures

Air Release: Hazardous concentrations in air may be found in local spill area and immediately downwind. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Water Release: This material is miscible in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.



Land Release: Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Additional Spill Information : Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

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## SECTION 7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

Storage: Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed.

Incompatible Materials for Storage: oxidizers, Bases

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Local exhaust ventilation is recommended if vapors, mists, aerosols or dusts are generated. Otherwise, use general exhaust ventilation.

### Protective Equipment for Routine Use of Product

Respiratory Protection : Respiratory protection not normally needed. If vapors, mists, aerosols or dusts are generated, wear a NIOSH approved respirator.

Respirator Type : A NIOSH approved full-face or half-face respirator in combination with chemical goggles. A NIOSH approved air purifying respirator with P100 filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear impervious gloves to avoid skin contact.

Eye Protection: Use chemical goggles and a faceshield.

Protective Clothing Type: Impervious

General Protective Measures: An eye wash and safety shower should be provided in the immediate work area.

### **Components with workplace control parameters**

no data available



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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	pale yellow, white
Odor:	slight
Molecular Weight:	None established
pH :	< 2.0 (@ 25 Deg. C)
Boiling Point:	226 °F (108 °C )
Freezing Point:	No data
Density:	
	Not applicable
Vapor Pressure:	17.00000000 mmHg @ 20 Deg. C
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	miscible
Partition coefficient n- octanol/water:	No data.
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	70.000 - 80.000
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	No data

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## SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures.
Chemical Incompatibility:	oxidizers, Bases
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Phosphines may form after all water has been removed., phosphorus oxides
Decomposition Temperature:	No data

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Component Animal Toxicology

#### Oral LD50 value:

ETIDRONIC ACID            LD50 = 1,440 mg/kg    Rat

### Component Animal Toxicology



Dermal LD50 value:

ETIDRONIC ACID LD50 > 4,764 mg/kg Rabbit

Component Animal Toxicology

Inhalation LC50 value:

ETIDRONIC ACID No data

Product Animal Toxicity

Oral LD50 value: LD50 Believed to be 4 - 5 g/kg. Rat

Dermal LD50 value: LD50 > 7,940 mg/kg Rabbit

Inhalation LC50 no data available

value:

Skin Irritation: This material is expected to be moderately irritating.

Eye Irritation: Corrosive to eyes.

Skin Sensitization: Negative skin sensitizer, guinea pig - Magnusson-Kligman method.

Acute Toxicity: This product is corrosive to the eyes, moderately irritating to the skin and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Subchronic / Chronic Toxicity: High oral exposure of a similar chemical to laboratory rodents has been shown to alter red and white cell count, decrease hemoglobin concentration and decrease the hematocrit value. This effect to blood occurred when they were fed a diet containing 3% HEDP-A. No effect was observed at a dietary concentration of 1%. The hematological effects observed in laboratory studies using rodents would be unlikely to occur in humans because of the high dose required.

Reproductive and Developmental Toxicity: This product has been tested and was shown not to produce any adverse effects on reproductive function or fetal development when administered to laboratory animals.

ETIDRONIC ACID

This product has been tested and was shown not to produce any adverse effects on reproductive function or fetal development when administered to laboratory animals.

Mutagenicity: This chemical has been tested and was shown to be non-mutagenic.

ETIDRONIC ACID

This chemical has been tested and was shown to be non-mutagenic.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. Chemicals of similar structure have been shown not to cause cancer in laboratory animals.

ETIDRONIC ACID

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. Chemicals of similar structure have been shown not to cause cancer in laboratory animals.

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## SECTION 12. ECOLOGICAL INFORMATION



Overview: Practically non-toxic to fish and other aquatic organisms., Practically non-toxic to wildlife and domestic animals.

Ecological Toxicity Values for: ETIDRONIC ACID

Bluegill	-	96 h LC50 = 868 mg/l
Rainbow trout ( <i>Salmo gairdneri</i> ),	-	96 h LC50 = 368 mg/l
Channel Catfish ( <i>Ictalurus punctatus rafinesque</i> ),	-	96 h LC50 = 695 mg/l
Sheepshead minnow	-	96 h LC50 = 2,180 mg/l
Daphnia magna,	-	48 h EC50= 527 mg/l
Grass shrimp	-	96 h LC50= 1,770 mg/l
Oyster Shell Deposition	-	96 h EC50= 89 mg/l
Mallard duck	-	Oral LD50 > 2,510 mg/kg
Bobwhite quail	-	Oral LD50 > 2,510 mg/kg

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## SECTION 13. DISPOSAL CONSIDERATIONS

**CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.**

Waste Disposal Summary : If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

Disposal Methods : As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : D002

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## SECTION 14. TRANSPORT INFORMATION

**DOT**

Not dangerous goods

**TDG**

UN number : 3265

Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.



(Etidronic acid)  
Class : 8  
Packing group : III  
Labels : 8

**IATA**

UN number : 3265  
Description of the goods : Corrosive liquid, acidic, organic, n.o.s.  
(Etidronic acid)  
Class : 8  
Packing group : III  
Labels : 8  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852  
Packing instruction (passenger aircraft) : Y841

**IMDG-CODE**

UN number : 3265  
Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Etidronic acid)  
Class : 8  
Packing group : III  
Labels : 8  
EmS Number 1 : F-A  
EmS Number 2 : S-B

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## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).





This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

#### **Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

#### **US State Regulations**

##### **Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

##### **Pennsylvania Right To Know**

Etidronic acid 2809-21-4

##### **New Jersey Right To Know**

Etidronic acid 2809-21-4  
Phosphorous acid 10294-56-1

##### **California Prop 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### **The components of this product are reported in the following inventories:**

TSCA : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

#### **Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)



**Arch  
Chemicals,  
Inc.**

**SAFETY DATA SHEET**

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## **SECTION 16. OTHER INFORMATION**

SECTIONS REVISED: 3, 4, 8, 11  
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .