SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

HTH Pool Care 6-Way Test Kit - OTO Solution

Version 2.0 Revision Date 2020.03.15 Print Date 2020.05.14

SECTION 1. IDENTIFICATION

Product name : HTH Pool Care 6-Way Test Kit - OTO Solution

Manufacturer or supplier's details

Company : Innovative Water Care, LLC
1400 Bluegrass Lakes Parkway
Alpharetta, GA
30004

Telephone : 1-800-511-6737 (Outside the USA: 1-423-780-2347)
E-mail address : sds@sigurawater.com
Emergency telephone number : 1-800-654-6911 (Outside the USA: 1-423-780-2970)

Recommended use of the chemical and restrictions on use

Recommended use : Water Testing Applications

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Carcinogenicity : Category 1B

Serious eye damage : Category 1

Skin corrosion : Sub-category 1B

Specific target organ toxicity - single exposure : Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H350 May cause cancer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapours.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P270 Do not eat, drink or smoke when using this product.
P234 Keep only in original container.
Response:
P390 Absorb spillage to prevent material damage.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P311 Call a POISON CENTER/ doctor.
P303 IF ON SKIN (or hair):
P362 + P364 Take off contaminated clothing and wash it before reuse.
P353 Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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/ doctor.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Hydrochloric acid (in water)	7647-01-0	0 - 10
salts of o-tolidine	612-82-8	0 - 1

SECTION 4. FIRST AID MEASURES

If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.
In case of eye contact	:	Immediately flush eyes for at least 15 minutes. Get medical attention.
If swallowed	:	Call a physician immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during firefighting	:	Will not burn Reacts with most metals to form flammable hydrogen gas.
Further information	:	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. Use water to cool containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus. 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. For disposal considerations see section 13.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

Advice on safe 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.
Conditions for safe storage	:	Keep in a dry, cool and well-ventilated place. Keep away from direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrochloric acid (in water)	7647-01-0		2 ppm	ACGIH
		Ceil_Time	5 ppm 7 mg/m3	NIOSH/GUIDE

Engineering measures : Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

Respiratory protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Hand protection

Remarks : Wear impervious gloves to avoid skin contact.

Eye protection : Use chemical goggles.
Emergency eyewash should be provided in the immediate work area.

Skin and body protection : butyl-rubber
Neoprene
VitonTM

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	clear
Colour	:	light yellow
Odour	:	none
Odour Threshold	:	no data available
pH	:	< 1.0

Melting point/freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	Not applicable
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Flammability (liquids)	:	no data available
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	2.261 kPa (77 °F / 25 °C)
Relative vapour density	:	no data available
Relative density	:	1.03
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Oxidizing properties	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under normal conditions. Product will not undergo hazardous polymerization.
Conditions to avoid	:	Store away from heat.
Incompatible materials	:	Strong oxidizing agents Alkalis Metals Cyanides sulfides water reactive materials
Hazardous decomposition products	:	After loss of water. Carbon oxides Nitrogen oxides (NOx) Chlorine Hydrogen chloride

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, skin, eyes, ingestion

Acute toxicity

Acute oral toxicity : LD50 (Rabbit): Believed to be approximately 3,000 mg/kg

Acute inhalation toxicity : Remarks: no data available

Skin corrosion/irritation

Remarks: Expected to be corrosive

Serious eye damage/eye irritation

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA#s list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential	:	Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B) Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002. As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	3264
Proper shipping name	:	Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Emergency Response Guidebook Number	:	154
Environmental hazards	:	no

TDG

UN number	:	3264
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IATA

UN number	:	3264
Proper shipping name	:	Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IMDG

UN number	:	3264
Proper shipping name	:	Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
EmS Number 1	:	F-A
EmS Number 2	:	S-B
Environmental hazards	:	Marine pollutant: no

ADR

UN number	:	3264
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Classification Code	:	C1
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no

RID

UN number	:	3264
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid)
Transport hazard class	:	8
Packing group	:	III
Classification Code	:	C1
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no
Special precautions for user	:	none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrochloric acid (in water)	7647-01-0	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrochloric acid (in water)	7647-01-0	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

Components	CAS-No.	Concentration
Hydrochloric acid (in water)	7647-01-0	0 - 10 %
salts of o-tolidine	612-82-8	0 - 1 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Components	CAS-No.	Concentration
Hydrochloric acid (in water)	7647-01-0	0 - 10 %
salts of o-tolidine	612-82-8	0 - 1 %

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Components	CAS-No.	Concentration
Hydrochloric acid (in water)	7647-01-0	0 - 10 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI 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.

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Hydrochloric acid (in water)	7647-01-0	5000

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Hydrochloric acid (in water)	7647-01-0	0 - 10 %

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

Components	CAS-No.
Hydrochloric acid (in water)	7647-01-0

Pennsylvania Right To Know

Components	CAS-No.
Hydrochloric acid (in water)	7647-01-0

New Jersey Right To Know

Components	CAS-No.
Hydrochloric acid (in water)	7647-01-0
salts of o-tolidine	612-82-8

California Prop. 65

WARNING **Cancer - www.P65Warnings.ca.gov.**

Components	CAS-No.
salts of o-tolidine	612-82-8

Canadian lists

NPRI

Components	CAS-No.
Hydrochloric acid (in water)	7647-01-0

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.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : US. ACGIH Threshold Limit Values
NIOSH/GUIDE : US. NIOSH: Pocket Guide to Chemical Hazards, as amended

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and De-

velopment; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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Revision Date : 2020.03.15

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.

Date format : yyyy/mm/dd
US / EN

Arch Chemicals, Inc.

SAFETY DATA SHEET

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: **PHENOL RED SOLUTION**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE:	5/21/2015
SUPERCEDES:	11/02/2010
MSDS Number:	000000024588
SYNONYMS:	None
CHEMICAL FAMILY:	Aqueous solution
DESCRIPTION / USE	Water Testing Applications
FORMULA:	NOT APPLICABLE/MIXTURE

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 (HazCom2012).

GHS Label element

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 (HazCom2012). Based on available data, the classification criteria are not met.Handle in accordance with good industrial hygiene and safety practice.

Precautionary statements :

Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P270 Do not eat, drink or smoke when using this product.
Response:
P314 Get medical advice/ attention if you feel unwell.
Storage:
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
P402 + P404 Store in a dry place. Store in a closed container.
Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Phenol Red	143-74-8	0 - 1

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: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

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:	Material will not ignite or burn.
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.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

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:	Not applicable
Water Release:	This material is slightly soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.
Land Release:	Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Contain all liquids for treatment or disposal.
Additional Spill Information :	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.

SECTION 7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing by wearing proper protective equipment. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.
Storage:	Store in a cool, dry and well ventilated place. Do not expose to direct light.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Protective Equipment for Routine Use of Product

Respiratory Protection :	Respiratory protection not normally needed.
Skin Protection :	Wear impervious gloves to avoid skin contact.
Eye Protection:	Use safety glasses with side shields.
Protective Clothing Type:	Impervious

Components with workplace control parameters

no data available

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	Red
Odor:	None
Molecular Weight:	Not applicable/Mixture
pH :	No data.
Boiling Point:	No data
Melting point/range	No data
Density:	No data
Vapor Pressure:	No data
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	slightly soluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	No data
VOC Content	No data
HAP Content	No data

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures
Chemical Incompatibility:	Strong oxidizing agents
Hazardous Decomposition Products:	None known
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Phenol Red	LD50	>	600.0 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

Phenol Red No data

Component Animal Toxicology
Inhalation LC50 value:
Phenol Red No data

Product Animal Toxicity
Oral LD50 value: LD50 Believed to be > 5,000 mg/kg
Dermal LD50 value: LD50 Believed to be > 2,000 mg/kg
Inhalation LC50 value: No data
Skin Irritation: Not expected to be irritating.
Eye Irritation: Not expected to be irritating.
Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity: There are no known or reported target organ effects from acute exposure.
Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Not known or reported to be mutagenic.
Phenol Red: This product was determined to be mutagenic in the Ames assay. It was also tested in the EPA Genetox program using the Bacillus subtilis rec-assay (bacterial DNA repair). The results of this assay were inconclusive.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No ecological information available.

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 DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.
Disposal Methods :	As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.
Potential US EPA Waste Codes :	Not applicable

SECTION 14. TRANSPORT INFORMATION

DOT
Not dangerous goods

TDG
Not dangerous goods

IATA
Not dangerous goods

IMDG-CODE
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

US State Regulations

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.

Pennsylvania Right To Know
No components are subject to the Pennsylvania Right to Know Act.

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

New Jersey Right To Know
No components are subject to the New Jersey Right to Know Act.

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.

Inventories

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

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 1
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. .

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

Hardness Titrant

Version 2.0 Revision Date 2020.03.15 Print Date 2021.05.18

SECTION 1. IDENTIFICATION

Product name : Hardness Titrant

Manufacturer or supplier's details

Company : Innovative Water Care, LLC
1400 Bluegrass Lakes Parkway
Alpharetta, GA
30004

Telephone : 1-800-511-6737 (Outside the USA: 1-423-780-2347)
E-mail address : sds@sigurawater.com
Emergency telephone number : 1-800-654-6911 (Outside the USA: 1-423-780-2970)

Recommended use of the chemical and restrictions on use

Recommended use : Water Testing Applications

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

GHS label elements

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Edetic acid	60-00-4	0.1 - 5
Sodium hydroxide	1310-73-2	0.1 - 0.2

SECTION 4. FIRST AID MEASURES

If inhaled	:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
In case of skin contact	:	IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
In case of eye contact	:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
If swallowed	:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use dry chemical, water fog, carbon dioxide (CO2), or foam.
Specific hazards during firefighting	:	This material is not expected to burn unless all the water is boiled away. The remaining compounds may be ignitable.
Further information	:	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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus. 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. For disposal considerations see section 13.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

Advice on safe 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.
Conditions for safe storage	:	Store in a cool, dry and well ventilated place. Keep away from direct sunlight.
Materials to avoid	:	Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Sodium hydroxide	1310-73-2		2 mg/m3	ACGIH
		Ceil_Time	2 mg/m3	NIOSH/GUIDE
		PEL	2 mg/m3	OSHA_TRANS
			2 mg/m3	Z1A

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

Personal protective equipment

Respiratory protection	:	Respiratory protection not normally needed.
Hand protection		
Remarks	:	Wear impervious gloves to avoid skin contact.
Eye protection	:	Use safety glasses with side shields.
Skin and body protection	:	Impervious

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	clear
Colour	:	colourless
Odour	:	none
Odour Threshold	:	no data available
pH	:	8.1
Melting point/freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	no data available
Evaporation rate	:	no data available

Flammability (solid, gas)	:	Product is not known to be flammable, combustible, pyrophoric or explosive.
Flammability (liquids)	:	no data available
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1
Density	:	no data available
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Oxidizing properties	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under normal conditions.
Conditions to avoid	:	High temperatures
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Nitrogen oxides (NOx) Carbon dioxide (CO2) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	This product will not exert a significant adverse effect to health from any route of exposure.

Acute toxicity

Acute oral toxicity	:	LD50 (Rat): Believed to be > 5,000 mg/kg
Acute inhalation toxicity	:	Remarks: no data available
Acute dermal toxicity	:	LD50 (Rabbit): Believed to be > 2,000 mg/kg

Skin corrosion/irritation

Result: No skin irritation

Serious eye damage/eye irritation

Remarks: Contact would be expected to cause transient redness if not washed out and left in the eye for an extended period of time.
Not considered to be a primary eye irritant.

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA#s list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Components:

Edetic acid:

Partition coefficient: n-octanol/water : log Pow: -3.340

Sodium hydroxide:

Partition coefficient: n-octanol/water : Remarks: Not applicable

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-

		Depleting Substances (40 CFR 82, Subpt. A, App A & B) Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data for product. Individual constituents are as follows:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	If this product becomes a waste, it will be a nonhazardous waste according to U.S. RCRA regulations. Dispose of in accordance with all Local, State, Federal, and Provincial Environmental Regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
TDG	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
IATA		Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
IMDG		Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable

ADR	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
RID	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
Special precautions for user	:	none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Edetic acid	60-00-4	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

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 neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (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 SOCMI 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.

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Edetic acid	60-00-4	5000
Sodium hydroxide	1310-73-2	1000

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Edetic acid	60-00-4	0.1 - 5 %
Sodium hydroxide	1310-73-2	0.1 - 1 %

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

Components	CAS-No.
Edetic acid	60-00-4

Pennsylvania Right To Know

Components	CAS-No.
Edetic acid	60-00-4

New Jersey Right To Know

Components	CAS-No.
Edetic acid	60-00-4

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.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

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.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	US. ACGIH Threshold Limit Values
NIOSH/GUIDE	:	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
OSHA_TRANS	:	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Z1A	:	US. OSHA Table Z-1-A (29 CFR 1910.1000)

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

First formulated version in SAP.
Revision Date : 2020.03.15

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.

Date format : yyyy/mm/dd
US / EN

Arch Chemicals, Inc.

SAFETY DATA SHEET

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 HARDNESS INDICATOR**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE:	00/00/0000
SUPERCEDES:	03/26/2008
MSDS Number:	000000023520
SYNONYMS:	None
CHEMICAL FAMILY:	Not Applicable/Mixture
DESCRIPTION / USE	Water Testing Applications
FORMULA:	NOT APPLICABLE/MIXTURE

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 2
Eye irritation	:	Category 2
Specific target organ toxicity - single exposure (Oral, Inhalation)	:	Category 3

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
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.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Triethanolamine	102-71-6	77
ISOPROPYL ALCOHOL	67-63-0	23
Eriochrome black TA	1787-61-7	0 - 1.0

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: Flush skin with water for 15 minutes. Take off all contaminated clothing. 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: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Flammable.

Flammable Properties

Flash Point:	66 °F
Autoignition Temperature:	No data
Fire / Explosion Hazards:	Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back.
Extinguishing Media:	Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires.
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. Use water to cool containers.
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Upper Flammable / Explosive Limit, % in air:	12 %(V)
Lower Flammable / Explosive Limit, % in air:	2 %(V)

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:	Contain all liquids for treatment or disposal.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Retain all contaminated water for removal and treatment. Contain all liquids for treatment or disposal.
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. Contain all liquids for treatment or disposal.
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.

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. Avoid direct exposure to sunlight or ultraviolet (UV) light sources.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."
Do Not Store At temperatures Above:	Ambient is satisfactory.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : A NIOSH approved air purifying respirator with organic vapor cartridge and P95 particulate 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 safety glasses with side shields.

Protective Clothing Type: Butyl rubber

General Protective Measures: Emergency eyewash should be provided in the immediate work area.

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Triethanolamine (102-71-6)	TWA	5 mg/m3	ACGIH (02 2014)
ISOPROPYL ALCOHOL (67-63-0)	TWA	200 ppm	ACGIH (02 2014)
	STEL	400 ppm	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	Dark blue
Odor:	ammoniacal
Molecular Weight:	Not applicable/Mixture
pH :	10.3
Boiling Point:	500 °F (260 °C)
Melting point/freezing point	No data
Density:	No data
Vapor Pressure:	No data
Vapor Density:	2 (Air=1)
Viscosity:	No data

Fat Solubility:	No data
Solubility in Water:	Soluble
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	No data
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI 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

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Static discharge may cause ignition at temperatures at or above the flash point. Not sensitive to mechanical shock. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Avoid direct exposure to sunlight or ultraviolet (UV) light sources.
Chemical Incompatibility:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Oxides of nitrogen
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Triethanolamine	LD50	=	7,390 mg/kg	Rat
ISOPROPYL ALCOHOL	LD50	=	5,045 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

Triethanolamine	LD50	>	2,000 mg/kg	Rabbit
ISOPROPYL ALCOHOL	LD50	=	13,000 mg/kg	Rabbit

Component Animal Toxicology
Inhalation LC50 value:

Triethanolamine	A saturated vapor concentration for 8 hours (rats) did not produce any deaths.
ISOPROPYL	Inhalation LC50 8 h = 16000 ppm Rat

ALCOHOL

Product Animal Toxicity

Oral LD50 value:	LD50	Believed to be >	5,000 mg/kg	Rat
Dermal LD50 value:	LD50	Believed to be >	2,000 mg/kg	Rabbit
Inhalation LC50 value:	No data			

Skin Irritation: May cause mild skin irritation.
Eye Irritation: May cause mild eye irritation.
Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Triethanolamine	This material tested negative for skin sensitization in animals.

Acute Toxicity: May cause mild skin and eye irritation. Inhalation of mist/vapors may cause mild mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Triethanolamine	Animal studies suggest that chronic (repeated) overexposure may result in damage to the liver and kidney.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Triethanolamine	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.
ISOPROPYL ALCOHOL	This material at concentrations above the occupational exposure limits has caused developmental effects in animals. However, these effects were observed only at those doses that resulted in maternal toxicity.

Mutagenicity: Not known or reported to be mutagenic.

Triethanolamine	This chemical has been shown to be non-mutagenic based on a battery of assays.
ISOPROPYL ALCOHOL	This material has been shown not to be mutagenic based on a battery of assays.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Triethanolamine	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.

ISOPROPYL ALCOHOL	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: Triethanolamine

Pimephales promelas (fathead minnow)	-	(measured, flow-through) 96 h LC50 = 11,800 mg/l
Daphnia magna,	-	(nominal, static). 24 h EC50= 1,850 mg/l
Common shrimp (Crangon crangon)	-	(nominal, renewal). 48 h LC50> 100 mg/l
Green algae (Scenedesmus subspicatus)	-	(nominal, static). 48 h EC50 = 750 mg/l

Ecological Toxicity Values for: ISOPROPYL ALCOHOL

Bluegill	-	(nominal, static). 96 h LC50 > 1,400 mg/l
Pimephales promelas (fathead minnow)	-	(measured, flow-through) 96 h LC50 10,400 mg/l
Mosquito fish	-	(nominal, static). 96 h LC50 > 1,400 mg/l
Daphnia magna,	-	(nominal, static). 24 h EC50 9,714 mg/l
Common shrimp (Crangon crangon)	-	(nominal, renewal). 48 h LC50 1,400 mg/l

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 meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.

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 :	D001

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	1993
Description of the goods	:	Flammable liquids, n.o.s.
	:	(Isopropanol)
Class	:	3
Packing group	:	II
Labels	:	3
Emergency Response Guidebook Number	:	128

TDG

UN number	:	1993
Description of the goods	:	FLAMMABLE LIQUID, N.O.S. (Isopropanol)
Class	:	3
Packing group	:	II
Labels	:	3

IATA

UN number	:	1993
Description of the goods	:	Flammable liquid, n.o.s. (Isopropanol)
Class	:	3
Packing group	:	II
Labels	:	3
Packing instruction (cargo aircraft)	:	364
Packing instruction (passenger aircraft)	:	353
Packing instruction (passenger aircraft)	:	Y341

IMDG-CODE

UN number	:	1993
Description of the goods	:	FLAMMABLE LIQUID, N.O.S. (Isopropanol)
Class	:	3
Packing group	:	II
Labels	:	3
EmS Number 1	:	F-E
EmS Number 2	:	S-E

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 SOCMI 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

2,2',2''-Nitrilotriethanol	102-71-6
Isopropanol	67-63-0

Pennsylvania Right To Know

2,2',2''-Nitrilotriethanol	102-71-6
Isopropanol	67-63-0

New Jersey Right To Know

2,2',2''-Nitrilotriethanol	102-71-6
Isopropanol	67-63-0
Eriochrome black TA	1787-61-7

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)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 15
Major References : Available upon request.

Arch Chemicals, Inc.

SAFETY DATA SHEET

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 CYANURIC ACID Reagent**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE:	00/00/0000
SUPERCEDES:	01/12/2004
MSDS Number:	000000023663
SYNONYMS:	None
CHEMICAL FAMILY:	Not Applicable/Mixture
DESCRIPTION / USE	Water Testing Applications
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a dangerous substance according to GHS.

GHS Label element

Not a dangerous substance according to GHS.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Melamine	108-78-1	0.1 - 5
Sodium acetate	127-09-3	0.1 - 5

Acetic Acid	64-19-7	0.1 - 5
Water	7732-18-5	90 - 99

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: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
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:	Not Applicable. - 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:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

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:	Contain all liquids for treatment or disposal.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquids for treatment or disposal.
Land Release:	Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Contain all liquids for treatment or disposal.
Additional Spill Information :	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.

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 and well ventilated place. Avoid direct exposure to sunlight.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."
Do Not Store At temperatures Above:	Ambient is satisfactory.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Protective Equipment for Routine Use of Product

Respiratory Protection :	Respiratory protection not normally needed. If spraying or misting occurs use a NIOSH approved respirator.
Respirator Type :	A NIOSH approved air purifying respirator with organic vapor cartridge and N95 particulate 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 safety glasses with side shields.
Protective Clothing Type:	Impervious

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Melamine (108-78-1)	TWA	10 mg/m3	WEEL (2012)
	TWA	5 mg/m3	WEEL (2012)
Acetic Acid (64-19-7)	TWA	10 ppm	ACGIH (02 2014)
	STEL	15 ppm	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	clear
Color:	colorless
Odor:	None
Molecular Weight:	Not applicable/Mixture
pH :	5.8
Boiling Point:	212 °F (100 °C)
Melting point/freezing point	No data
Density:	No data
Vapor Pressure:	17
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	Soluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	< 99%
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI 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

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures

Chemical Incompatibility:	Strong oxidizing agents, Fluorine
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, nitrogen oxides, cyanides
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Melamine	LD50	= 3,161 mg/kg	Rat
Acetic Acid	LD50	3,310 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

Melamine	LD50	> 1,000 mg/kg	Rabbit
Acetic Acid	LD50	1,060 mg/kg	Rabbit

Component Animal Toxicology
Inhalation LC50 value:

Melamine	LC50	3,248.0 mg/l	Rat	
Acetic Acid	Inhalation LC50	1 h	5620 ppm	Mouse

Product Animal Toxicity

Oral LD50 value:	LD50	Believed to be >	5,000 mg/kg	Rat
Dermal LD50 value:	LD50	Believed to be >	2,000 mg/kg	Rabbit
Inhalation LC50 value:	No data			

Skin Irritation: Contact would be expected to cause transient redness if not washed off and left on the skin for an extended period of time., Not considered to be a primary skin irritant.

Eye Irritation: Contact would be expected to cause transient redness if not washed out and left in the eye for an extended period of time., Not considered to be a primary eye irritant.

Acute Toxicity: There are no known or reported target organ effects from acute exposure.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Melamine: This chemical has been tested in laboratory animals and no evidence of teratogenicity was seen.

Mutagenicity: Not known or reported to be mutagenic.

Melamine: This chemical has been tested in a battery of

	mutagenicity/genotoxicity assays and the results were negative.
Acetic Acid	This product has been tested for mutagenicity. Tests revealed both positive and negative results. Based on the weight of evidence, we judge this product NOT to be a mutagenic hazard.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Melamine	The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.
Acetic Acid	This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No ecological information available.

Ecological Toxicity Values for: Acetic Acid

Pimephales promelas (fathead minnow)	-	static test 96 h LC50 = 79 mg/l
	-	static test 96 h LC50 = 251 mg/l
Daphnia magna (Water flea)	-	static test 48 h EC50= 65 mg/l

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 nonhazardous waste according to U.S. RCRA regulations. Dispose of in accordance with all Local, State, Federal, and Provincial Environmental Regulations.

Disposal Methods :	As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.
Potential US EPA Waste Codes :	Not applicable

SECTION 14. TRANSPORT INFORMATION

DOT
Not dangerous goods

TDG
Not dangerous goods

IATA
Not dangerous goods

IMDG-CODE
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic acid	64-19-7	5000	

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Acetic acid	64-19-7

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Acetic acid	64-19-7

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

Acetic acid	64-19-7
Melamine	108-78-1

Pennsylvania Right To Know

Acetic acid	64-19-7
Sodium acetate	127-09-3
Melamine	108-78-1

New Jersey Right To Know

Acetic acid	64-19-7
Sodium acetate	127-09-3
Melamine	108-78-1

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)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED:	First formulated version in SAP.
Major References :	Available upon request.

Arch Chemicals, Inc.

SAFETY DATA SHEET

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 ALKALINITY Titrant**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE:	00/00/0000
SUPERCEDES:	01/12/2004
MSDS Number:	000000023662
SYNONYMS:	None
CHEMICAL FAMILY:	Not Applicable/Mixture
DESCRIPTION / USE	Water Testing Applications
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation	:	Category 2
Eye irritation	:	Category 2

GHS Label element

Hazard pictograms :

Signal word	:	Warning
Hazard statements	:	H315 Causes skin irritation. H319 Causes serious eye irritation.
Precautionary statements	:	**Prevention:** P264 Wash skin thoroughly after handling. P280 Wear eye protection/ face protection. P280 Wear protective gloves. **Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P402 + P404 Store in a dry place. Store in a closed container.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
SULFURIC ACID	7664-93-9	0.1 - 5
Water	7732-18-5	95 - 99

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.

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:	Material will not ignite or burn. Reacts with most metals to form flammable hydrogen gas.
Extinguishing Media:	Not Applicable. - 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. Use water to cool containers.
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

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:	Contain all liquids for treatment or disposal.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.
Land Release:	Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Contain all liquids for treatment or disposal.
Additional Spill Information :	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.

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 and well ventilated place. Avoid direct exposure to sunlight.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."
Do Not Store At temperatures Above:	Ambient is satisfactory.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Protective Equipment for Routine Use of Product

Respiratory Protection :	Respiratory protection not normally needed. If spraying or misting occurs use a NIOSH approved respirator.
Respirator Type :	NIOSH approved full-face air purifying respirator with an N95 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. Emergency eyewash should be provided in the immediate work area.
Protective Clothing Type:	Butyl rubber, Neoprene, VitonTM, Natural rubber

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
SULFURIC ACID (7664-93-9)	TWA	0.2 mg/m3	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	clear
Color:	Colorless
Odor:	None
Molecular Weight:	Not applicable/Mixture
pH :	1.3
Boiling Point:	212 °F (100 °C)

Melting point/freezing point	No data
Density:	1.0g/cc
Vapor Pressure:	17 mmHg
Vapor Density:	0.6
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	Soluble
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	> 99.0
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI 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

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures, Avoid direct exposure to sunlight or ultraviolet (UV) light sources.
Chemical Incompatibility:	Metals, strong alkalies
Hazardous Decomposition Products:	Oxides of sulfur
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

SULFURIC ACID	LD50	=	2,140 mg/kg	Rat

Component Animal Toxicology
Dermal LD50 value:

SULFURIC ACID	LD50	>	2,000 mg/kg	Rabbit

Component Animal Toxicology
Inhalation LC50 value:

SULFURIC ACID	LC50 1 h (aerosol)	=	1.02 mg/l	Rat

Product Animal Toxicity

Oral LD50 value:	LD50 Believed to be > 5,000 mg/kg Rat
Dermal LD50 value:	LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value:	LC50 1 h Believed to be > 100 mg/l Rat
Skin Irritation:	This material is expected to be moderately irritating.
Eye Irritation:	This material is expected to be corrosive.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.
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:	Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity., The following data is available for sulfuric acid:

SULFURIC ACID	This product did not cause reproductive or developmental effects in a study with laboratory animals.

Mutagenicity: Not known or reported to be mutagenic., The following data is available for sulfuric acid:

SULFURIC ACID	This product has been tested for mutagenicity. Tests revealed both positive and negative results. Based on the weight of evidence, we judge this product NOT to be a mutagenic hazard.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA., The following data is available for sulfuric acid:

SULFURIC ACID	This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA. IARC evaluated several epidemiology studies where workers from a variety of industries had been exposed to a mixture of strong inorganic acid mists. IARC has concluded that there is sufficient evidence that occupational exposure to a mixture of strong inorganic-acid mists containing sulfuric acid is carcinogenic to humans (Group I carcinogen). Because cancer has not been observed in animals when they are exposed only to sulfuric acid mists, exposure to sulfuric acid by itself was not determined to be carcinogenic to humans.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: SULFURIC ACID

Mosquito fish	-	(nominal, static). 96 h LC50 42 mg/l
Bluegill sunfish	-	96 h LC50 10.5 mg/l
Common shrimp (Crangon crangon)	-	(nominal, renewal). 48 h LC50 70-80 mg/l
Daphnia magna,	-	24 h EC50 29 mg/l

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 meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002.
Disposal Methods :	As a hazardous solid waste it should be disposed of in accordance with local, state and federal regulations.
Potential US EPA Waste Codes :	D002

SECTION 14. TRANSPORT INFORMATION

DOT
Not dangerous goods

TDG
Not dangerous goods

IATA
Not dangerous goods

IMDG-CODE
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulphuric acid	7664-93-9	1000	

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulphuric acid	7664-93-9	1000	

SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

Sulphuric acid 7664-93-9

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Sulphuric acid 7664-93-9

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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Sulphuric acid 7664-93-9

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

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sulphuric acid	7664-93-9

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sulphuric acid	7664-93-9

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

Sulphuric acid	7664-93-9

Pennsylvania Right To Know

Sulphuric acid	7664-93-9

New Jersey Right To Know

Sulphuric acid	7664-93-9

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)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: First formulated version in SAP.
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. .

Arch Chemicals, Inc.

SAFETY DATA SHEET

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 ALKALINITY Indicator**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE:	00/00/0000
SUPERCEDES:	01/12/2004
MSDS Number:	000000023661
SYNONYMS:	None
CHEMICAL FAMILY:	Not Applicable/Mixture
DESCRIPTION / USE	Water Testing Applications
FORMULA:	None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation	:	Category 2
Eye irritation	:	Category 2

GHS Label element

Hazard pictograms :

Signal word	:	Warning
Hazard statements	:	H315 Causes skin irritation. H319 Causes serious eye irritation.
Precautionary statements	:	**Prevention:** P264 Wash skin thoroughly after handling. P280 Wear eye protection/ face protection. P280 Wear protective gloves. **Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P402 + P404 Store in a dry place. Store in a closed container.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Bromocresol green	76-60-8	0 - 1
2-[[4-(Dimethylamino)phenyl]azo]benzoic acid (methyl red)	493-52-7	0 - 1
Sodium carbonate	497-19-8	0 - 1
Sodium hydroxide	1310-73-2	0 - 1
Sodium Thiosulfate	7772-98-7	0 - 1
Water	7732-18-5	95 - 100

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: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
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:	Not Applicable. - 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:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

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.
<u>Spill Mitigation Procedures</u>	
Air Release:	Contain all liquids for treatment or disposal.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquids for treatment or disposal.
Land Release:	Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Contain all liquids for treatment or disposal.

Additional Spill Information :	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.

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 and well ventilated place. Avoid direct exposure to sunlight.
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."
Do Not Store At temperatures Above:	Ambient is satisfactory.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Protective Equipment for Routine Use of Product

Respiratory Protection :	Respiratory protection not normally needed. If spraying or misting occurs use a NIOSH approved respirator.
Respirator Type :	Wear a NIOSH approved N95 respirator.
Skin Protection :	Wear impervious gloves to avoid skin contact.
Eye Protection:	Use safety glasses with side shields.
Protective Clothing Type:	Impervious

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Sodium hydroxide (1310-73-2)		2 mg/m3	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	Dark Green
Odor:	None

Molecular Weight:	Not applicable/Mixture
pH :	10
Boiling Point:	212 °F (100 °C)
Melting point/freezing point	No data
Density:	1.0
Vapor Pressure:	17
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	Soluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	No data
Oxidizing:	No data
Volatiles, % by vol.:	< 99%
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI 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

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures
Chemical Incompatibility:	Strong oxidizing agents, acids
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Sulfur oxides, Hydrogen sulfide
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

Sodium carbonate	LD50	= 4,090 mg/kg Rat
Sodium hydroxide	LD50	Believed to be 300 - 500 mg/kg Rat

Component Animal Toxicology
Dermal LD50 value:

Sodium carbonate	LD50	Believed to be > 2,000 mg/kg Rabbit
Sodium hydroxide	no data available	

Component Animal Toxicology
Inhalation LC50 value:

Sodium carbonate	LC50	1 h	=	4.6 mg/l Rat
Sodium hydroxide	No data			

Product Animal Toxicity

Oral LD50 value:	LD50	Believed to be >	5,000 mg/kg	Rat
Dermal LD50 value:	LD50	Believed to be >	2,000 mg/kg	Rabbit
Inhalation LC50 value:	No data			

Skin Irritation: Contact would be expected to cause transient redness if not washed off and left on the skin for an extended period of time., Not considered to be a primary skin irritant.

Eye Irritation: Contact would be expected to cause transient redness if not washed out and left in the eye for an extended period of time., Not considered to be a primary eye irritant.

Acute Toxicity: There are no known or reported target organ effects from acute exposure.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Sodium carbonate	Male rats were exposed to an aerosol of 2% aqueous solution of this chemical, 4 hr.day, 5 days/week for 3-1/2 months. No effect was observed at a concentration of 10 or 20 mg/cubic meter. At 70 mg/cubic meter weight gain was decreased and the lungs showed thickening of the intra-alveolar walls, hyperemia, and lymphoid infiltration., Repeated or prolonged skin contact with this product may cause dermatitis and blistering.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Sodium carbonate	This chemical has been tested in laboratory animals and no evidence of teratogenicity was seen.

Mutagenicity: Not known or reported to be mutagenic.

Sodium carbonate	This product was determined to be non-mutagenic in the Ames assay. It was also shown to be non-clastogenic in the chromosomal aberration test.
Sodium hydroxide	This chemical has been shown to be non-mutagenic based on a battery of assays.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

2-[[4-(Dimethylamino)phenyl]azo]benzoic	The International Agency for Research on Cancer (IARC) has classified this product or a component of

acid (methyl red)	this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.
Sodium hydroxide	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: Sodium carbonate

Pimephales promelas (fathead minnow)	-	(nominal, static). 96 h LC50 < 850 mg/l
Bluegill	-	(nominal, static). 96 h LC50 = 320 mg/l
Mosquito fish	-	(nominal, static). 96 h LC50 = 740 mg/l
Daphnia magna,	-	(nominal, static). 48 h LC50= 265 mg/l
Ceriodaphnia dubia	-	(nominal) 48 h EC50= 199.82 mg/l
Navicula seminulum (diatom)	-	(nominal, static). 96 h EC50 = 242 mg/l

Ecological Toxicity Values for: Sodium hydroxide

Mosquito fish	-	96 h LC50 = 125 mg/l
Bluegill	-	48 h LC50 = 99 mg/l

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 nonhazardous waste.
Disposal Methods :	As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.
Potential US EPA Waste Codes :	Not applicable

SECTION 14. TRANSPORT INFORMATION

DOT
Not dangerous goods

TDG
Not dangerous goods

IATA
Not dangerous goods

IMDG-CODE
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hydroxide	1310-73-2	1000	

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sodium hydroxide	1310-73-2

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sodium hydroxide	1310-73-2

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

Sodium hydroxide	1310-73-2

Pennsylvania Right To Know

Sodium hydroxide	1310-73-2

New Jersey Right To Know

Sodium hydroxide	1310-73-2
2-(4-Dimethylaminophenylazo)benzoic acid	493-52-7

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)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: First formulated version in SAP.
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. .