



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 MSDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: HTH® ALKALINITY PLUS

1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc. 501 Merritt 7 PO Box 5204 Norwalk, CT 06856-5204	REVISION DATE:	12/24/2008
	SUPERCEDES:	02/26/2005
	MSDS Number:	000000003229
	SYNONYMS:	Sodium bicarbonate, Alkalinity Adjuster
	CHEMICAL FAMILY:	Carbonate
	DESCRIPTION / USE:	Alkalinity adjuster for swimming pools and spas
FORMULA:	NaHCO3	

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	Mild eye irritant
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Routes of Entry:	Inhalation, skin, eyes, ingestion
Chemical Interactions:	No known or reported interactions.
Medical Conditions Aggravated:	None known or reported

Human Threshold Response Data

Odor Threshold	Not established.
Irritation Threshold	Not established.

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	1	0	0	
NFPA	1	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity: Can cause mechanical irritation if dusts are generated. Not expected to be toxic by inhalation.



Skin Toxicity: Contact would be expected to cause transient redness if not washed off and left on the skin for an extended period of time. Not expected to be absorbed through the skin. Not expected to be toxic from dermal contact.

Eye Toxicity: May cause mild eye irritation. No corneal involvement or visual impairment is expected.

Ingestion Toxicity: Ingestion may cause mild irritation of the gastrointestinal tract and may also cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Not expected to be toxic by ingestion.

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

Prolonged (Chronic) Health Effects

Carcinogenicity: This material did not cause cancer in long-term animal studies.

Reproductive and Developmental Toxicity: This product did not cause developmental effects in a study with laboratory animals.

Inhalation: There are no known or reported effects from chronic exposure.

Skin Contact: There are no known or reported effects from chronic exposure except for effects (if any) similar to those experienced from acute exposure.

Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.

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

Chronic Target Organ Toxicity: There are no known or reported effects to humans from repeated exposure to this product.

Supplemental Health Hazard Information : No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
Sodium Bicarbonate	144-55-8	99.0 - 100

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.



5. FIRE FIGHTING 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.
Hazardous Combustion Products: Carbon dioxide
Upper Flammable / Explosive Limit, % in air: Not applicable
Lower Flammable / Explosive Limit, % in air: Not applicable

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: Sweep up and place in suitable clean, dry containers for reclamation or later disposal. Do not place spill materials back in their original containers.
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.

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 dust from this material.
Storage: Store in a cool, dry and well ventilated place.
Incompatible Materials for Storage: acids
Do Not Store At temperatures Above: 85 DEG°C / 185 DEG°F



8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Local exhaust ventilation is recommended if significant dusting occurs. Otherwise use general exhaust ventilation.

Protective Equipment for Routine Use of Product

Respiratory Protection : Respiratory protection not normally needed. If dusting occurs, wear 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

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
No Data Found			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	lumps and powder
Color:	white
Odor:	None
Molecular Weight:	84.00
Specific Gravity :	2.2000
pH :	8.3 1% solution
Boiling Point:	Decomposes
Freezing Point:	Not applicable
Melting Point:	Not applicable
Density:	2.1590
Vapor Pressure:	(@ 25 Deg. C) Not applicable
Vapor Density:	Not applicable
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	8.50000 - 10.00000 % (@ 25 Deg. C)
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	Not applicable
Oxidizing:	No data
Volatiles, % by vol.:	Not applicable
VOC Content	No data
HAP Content	No data

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: Sparks, open flame, other ignition sources, and elevated temperatures., Contact with incompatible substances

Chemical Incompatibility: acids



Hazardous Decomposition Products: Carbon dioxide
Decomposition Temperature: No data

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

Sodium Bicarbonate LD50 > 5,000 mg/kg Rat

Dermal LD50 value:

Sodium Bicarbonate LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 value:

Sodium Bicarbonate Inhalation LC50 4 h (Whole-body) > 4.74 MG/L Rat

Product Animal Toxicity

Oral LD50 value: LD50 > 5,000 mg/kg Rat

Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 value: Inhalation LC50 4 h (Whole-body) > 4.74 MG/L Rat

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.

Eye Irritation:

This material is expected to be slightly 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:

This product did not cause developmental effects in a study with laboratory animals.

Sodium Bicarbonate

This product did not cause developmental effects in a study with laboratory animals.

Mutagenicity:

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

Sodium Bicarbonate

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

Carcinogenicity:

This material did not cause cancer in long-term animal studies.

Sodium Bicarbonate

This material did not cause cancer in long-term animal studies.

12. ECOLOGICAL INFORMATION

Overview: Practically non- toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: Sodium Bicarbonate

Bluegill sunfish - (measured, flow-through) 96 h LC50 = 7,100 mg/l
Bluegill sunfish - (nominal, static). 96 h LC50 = 8,600 mg/l



- Rainbow trout (Oncorhynchus mykiss) - (measured, flow-through) 96 h LC50 = 7,700 mg/l
- Mosquito fish - (nominal, static). 96 h LC50 = 7,550 mg/l
- Daphnia magna, - (measured, flow-through) 48 h LC50= 4,100 mg/l
- Daphnia magna, - (nominal, static). 48 h EC50= 1,640 mg/l
- Ceriodaphnia dubia - (nominal, static). 48 h LC50= 1,075 mg/l
- Daphnia magna, - (static, renewal) 21 day EC50 (chronic toxicity)> 576 mg/l

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

14. TRANSPORT INFORMATION

Land (US DOT): NOT REGULATED AS A DOT HAZARDOUS MATERIAL
 Water (IMDG): NOT REGULATED AS A HAZARDOUS MATERIAL,

Flash Point: Not applicable

Air (IATA): NOT REGULATED AS A HAZARDOUS MATERIAL,
 Emergency Response Guide Number: Not applicable

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): Not registered in the US under FIFRA.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health	Immediate (Acute) Health Hazard
Physical	None



Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302 TPQ (threshold planning quantity) None established

Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA Reportable quantity None established
ZUS_SAR302 Reportable quantity None established

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313 De minimis concentration None established

Clean Air Act Toxic ARP Section 112r:

CAA 112R None established

Clean Air Act Socmi:

HON SOC None established

Clean Air Act VOC Section 111:

CAA 111 None established

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
ZUSPA_RTK	None established

New Jersey:

CAS #	COMPONENT NAME
ZUSNJ_RTK	None established

Massachusetts:

CAS #	COMPONENT NAME
ZUSMA_RTK	None established

California Proposition 65:

CAS #	COMPONENT NAME
ZUSCA_P65	None established



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

WHMIS Hazard Classification:

None established

16. OTHER INFORMATION

MSDS REVISION STATUS : Revised to meet the ANSI standard of 16 sections
SECTIONS REVISED: 2, 3, 4
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. .