Arch Chemicals, Inc.

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

PRODUCT NAME: **POOLIFE PH MINUS**

1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204
Norwalk, CT 06856-5204

REVISION DATE:	10/05/2010
SUPERCEDES:	12/07/2009
MSDS Number:	000000002193
SYNONYMS:	Dry acid
CHEMICAL FAMILY:	Sulfate
DESCRIPTION / USE	pH and alkalinity adjuster for swimming pools
FORMULA:	NaHSO4

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	**Corrosive to eyes, skin and mucous membranes**

Routes of Entry:	Inhalation, skin, eyes, ingestion
Chemical Interactions:	No known interactions
Medical Conditions Aggravated:	Asthma, respiratory and cardiovascular disease, Skin diseases including eczema and sensitization

Human Threshold Response Data

Odor Threshold	Not established for product.
Irritation Threshold	Not established for product.

Hazardous Materials Identification System / National Fire Protection Association Classifications

Hazard Ratings :	Health	Flammability	Physical / Instability	PPI / Special hazard.
HMIS	3	0	0	
NFPA	3	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity: Inhalation of dust may cause irritation and/or burns to the mucous membranes of the respiratory tract.

Skin Toxicity: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION. WET MATERIAL CAUSES SKIN BURNS. Dermal exposure to dry material causes moderate skin irritation characterized by redness and swelling. Dermal exposure to wet material can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.

Eye Toxicity: Severe irritation and/or burns can occur following exposure. Direct contact may cause impairment of vision and corneal damage. Rinsing of the eye should take place immediately.

Ingestion Toxicity: Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding, and/or tissue ulceration. Ingestion may cause severe damage to the gastrointestinal tract with the potential to cause perforation.

Acute Target Organ Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract., The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Prolonged (Chronic) Health Effects

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

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

Inhalation: There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.

Skin Contact: Effects similar to those from acute exposure. In addition, chronic exposure to wet material may cause effects secondary to tissue destruction.

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

Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure. The acute corrosivity of this product, makes chronic ingestion of significant amounts unlikely.

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 target organ effects from chronic exposure.
Supplemental Health Hazard Information :	No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
SULFURIC ACID, MONOSODIUM SALT	7681-38-1	91.5 - 94.7
SULFURIC ACID DISODIUM SALT	7757-82-6	4.8 - 8.0

4. FIRST AID MEASURES

Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. If not breathing, give artificial respiration. Call for medical assistance.
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.

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:	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

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to boots, impervious gloves, hard hat, splash-proof goggles, impervious clothing, i.e., chemically impermeable suit, self-contained breathing apparatus.
Spill Mitigation Procedures	
Air Release:	Vapors may be suppressed by the use of water fog.
Water Release:	Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all solids for treatment or disposal.
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 ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Avoid contact with water, or moist air.
Incompatible Materials for Storage:	strong alkalies
Do Not Store At temperatures Above:	175 DEG°C / 347 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 :	If dusting occurs, wear 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.
Protective Clothing Type:	Butyl rubber, Neoprene
General Protective Measures:	An eye wash and safety shower should be provided in the immediate work area.

Exposure Limit Data

CHEMICAL NAME	CAS #	Name of Limit	Exposure
No Data Found			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	granular
Color:	off-white
Odor:	pungent
Molecular Weight:	120.00
Specific Gravity :	2.7400
pH :	< 1.0 @ 5% aqueous solution
Boiling Point:	decomposes
Freezing Point:	Not applicable
Melting Point:	177 DEG°C / 350 DEG°F
Density:	No data.
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	1080.00000 gm/l 68.00 DEG°F
Partition coefficient n-octanol/water:	Not applicable

Evaporation Rate:	Not applicable
Oxidizing:	No data
Volatiles, % by vol.:	Not applicable
VOC Content	Not applicable
HAP Content	Not applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Will react in water to form a weak solution of sulfuric acid. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures.
Chemical Incompatibility:	acids, Bases, oxidizers
Hazardous Decomposition Products:	Sulfur oxides
Decomposition Temperature:	315 DEG°C - , 599 DEG°F-

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:

SULFURIC ACID, MONOSODIUM SALT	LD50	Believed to be	2,800 mg/kg	Rat	
SULFURIC ACID DISODIUM SALT	LD50	=	5,989 mg/kg	mouse	
SULFURIC ACID DISODIUM SALT	LD50	Believed to be >	10,000 mg/kg	rat	

Component Animal Toxicology
Dermal LD50 value:

SULFURIC ACID, MONOSODIUM SALT	No data
SULFURIC ACID DISODIUM SALT	no data available

Component Animal Toxicology
Inhalation LC50 value:

SULFURIC ACID, MONOSODIUM SALT	No data
SULFURIC ACID DISODIUM SALT	no data available

Product Animal Toxicity

Oral LD50 value:	LD50 Believed to be > 3,000 mg/kg Rat
Dermal LD50 value:	LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value:	No data
Skin Irritation:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.
Eye Irritation:	Corrosive to eyes.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.
Acute Toxicity:	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract.The dry material is irritating to the skin. However when wet, it will produce burns to the skin.
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.
SULFURIC ACID DISODIUM SALT	This product was determined to be non-mutagenic in the Ames assay., This product has been shown to be negative for cell transformation in the Syrian hamster embryo (SA7/SHE) cell assay.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

12. ECOLOGICAL INFORMATION

Overview: Slightly toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: **SULFURIC ACID, MONOSODIUM SALT**

Daphnia magna, - 100 h LC50> 106 mg/l

Ecological Toxicity Values for: **SULFURIC ACID DISODIUM SALT**

Lepomis macrochirus (Bluegill sunfish) - 96 h LC50 = 12,750 mg/l

Pimephales promelas (fathead minnow)	-	96 h LC50 = 7,960 mg/l
Gambusia affinis (Mosquito fish)	-	96 h LC50 = 3,710 mg/l
Daphnia magna (Water flea)	-	48 h LC50= 2,564 mg/l
Ceriodaphnia dubia	-	48 h LC50= 3,080 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.

Disposal Methods : As a nonhazardous solid 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

Transportation Notes**:** According to TDG (Canadian Transport Regulations), this product is not regulated as a hazardous material.

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
7757-82-6	SULFURIC ACID DISODIUM SALT

ZUSPA_RTK

Pennsylvania: Hazardous substance list
1990-01-01
SODIUM SULFATE (SOLUTION)
Environmental hazard, hazardous substance

New Jersey:

CAS #	COMPONENT NAME
7681-38-1	SULFURIC ACID, MONOSODIUM SALT

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)
1989-12-01
SODIUM HYDROGEN SULFATE
special health hazard substance, Special Health Hazard - Corrosive

Massachusetts:

CAS #	COMPONENT NAME
7757-82-6	SULFURIC ACID DISODIUM SALT

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications
1991-07-01
SODIUM SULFATE (SOLUTION)
massachusetts hazardous substance

California Proposition 65:

CAS #	COMPONENT NAME

ZUSCA_P65 None established

WHMIS Hazard Classification:



D2B: Toxic Material Causing Other Toxic Effects : : : :

Corrosive to eyes, Skin irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Ingredient Disclosure List (WHMIS)
2007-08-24
Threshold limits: 1 Weight percent
305
Sodium bisulfate

16. OTHER INFORMATION

MSDS REVISION STATUS :
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. .