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| 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: Salt Solutions by Ultima Monthly Salt Maintenance

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|-------------------|-------------------------------|
| Arch Chemicals, Inc. 1200 Bluegrass Lakes Parkway Alpharetta, GA 30004 | REVISION DATE: | 05/26/2015 |
| | SUPERCEDES: | |
| | MSDS Number: | 000000025674 |
| | SYNONYMS: | None |
| | CHEMICAL FAMILY: | Mixture |
| | DESCRIPTION / USE | Swimming pool water treatment |
| | FORMULA: | None established |

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

| | | |
|---|---|---------------------------------|
| Oxidizing solids | : | Category 1 |
| Corrosive to metals | : | Category 1 |
| Acute toxicity (Inhalation) | : | Category 4 |
| Skin corrosion | : | Category 1B |
| Serious eye damage | : | Category 1 |
| Respiratory sensitisation | : | Category 1 |
| Skin sensitisation | : | Category 1 |
| Specific target organ toxicity - single exposure | : | Category 3 (Respiratory system) |

GHS Label element



Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H271 May cause fire or explosion; strong oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

Precautionary statements

:

Prevention:

P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P234 Keep only in original container.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P283 Wear fire/ flame resistant/ retardant clothing.
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. 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 or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P371 + P380 + P375 In case of major fire and large quantities:



Evacuate area. Fight fire remotely due to the risk of explosion.
P390 Absorb spillage to prevent material damage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>CAS OR CHEMICAL NAME</u> | <u>CAS #</u> | <u>% RANGE</u> |
|-----------------------------|--------------|----------------|
| POTASSIUM PEROXYMONOSULFATE | 10058-23-8 | 32.3 - 34.4 |
| POTASSIUM SULFATE | 7778-80-5 | 21.8 - 23.2 |
| POTASSIUM BISULFATE | 7646-93-7 | 17.3 - 18.4 |
| Hexametaphosphate | 68915-31-1 | 15.0 - 19.0 |
| Aluminum Sulfate | 17927-65-0 | 5.0 - 7.0 |
| POTASSIUM PEROXYDISULFATE | 7727-21-1 | 2.3 - 2.4 |
| MAGNESIUM CARBONATE | 546-93-0 | 1.5 - 1.6 |

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. 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.

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. Will release oxygen when heated, intensifying a fire
Extinguishing Media: Water only.
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.
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: 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: Contain all solids for treatment or disposal. Contain all solids 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. 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: Sweep up and place in suitable clean, dry containers for reclamation or later disposal. Avoid dust generation. Do not place spill materials back in their original containers. After removal, flush contaminated area thoroughly with water. Sweep up and place in suitable clean, dry containers for reclamation or later disposal. Do not place spill materials back in their original containers. After removal, flush contaminated area thoroughly with water.



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 inhalation of dust and fumes.

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

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

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 : Wear a NIOSH approved N95 respirator.

Skin Protection : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye Protection: Use chemical goggles.

Protective Clothing Type: Neoprene

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

Components with workplace control parameters

| Components (CAS-No.) | Value | Control parameters | Basis (Update) |
|--|-------|--------------------|-----------------|
| Aluminum Sulfate (17927-65-0) | TWA | 1 mg/m3 | ACGIH (02 2014) |
| POTASSIUM PEROXYDISULFATE (7727-21-1) [as persulfate] | TWA | 0.1 mg/m3 | ACGIH (02 2014) |



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|-------------------------|
| Physical State: | powder |
| Form | solid |
| Color: | white |
| Odor: | No data. |
| Molecular Weight: | No data |
| pH : | 1.5 - 3.0 1% solution |
| Boiling Point: | Not applicable |
| Melting point/freezing point | No data |
| Density | 1.055 g/cm ³ |
| Vapor Pressure: | No data |
| Vapor Density: | No data |
| Viscosity: | No data |
| Fat Solubility: | No data |
| Solubility in Water: | soluble |
| Partition coefficient n-octanol/water: | |
| Evaporation Rate: | Not applicable |
| 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. |
| Conditions to Avoid: | Sparks, open flame, other ignition sources, and elevated temperatures. |
| Chemical Incompatibility: | Halides, Cyanides, Heavy metals such as cobalt, nickel, copper, or manganese, oxidizers |
| Hazardous Decomposition Products: | Carbon monoxide, Carbon dioxide, Decomposes when heated or dampened, releasing oxygen and heat |
| Decomposition Temperature: | No data |

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

| | | |
|------------------------|--|-------|
| POTASSIUM BISULFATE | LD50 = 2,340 mg/kg | Rat |
| Hexametaphosphate | LD50 = 3,053 mg/kg | Rat |
| Aluminum Sulfate | LD50 anhydrous substance = 6,207 mg/kg | Mouse |
| | LD50 anhydrous substance = 1,930 mg/kg | Rat |



Component Animal Toxicology

Dermal LD50 value:

Hexametaphosphate no data available
Aluminum Sulfate LD50 anhydrous substance Believed to be > 2,000 mg/kg Rabbit

Component Animal Toxicology

Inhalation LC50 value:

Hexametaphosphate LC50 4 h > 3.69 mg/l Rat

Aluminum Sulfate No data

Product Animal Toxicity

Oral LD50 value: LD50 Believed to be approximately 2,100 mg/kg Rat
Dermal LD50 value: LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value: LC50 1 h (aerosol dust) Believed to be > 18.8 mg/l Rat
Skin Irritation: This material is expected to be corrosive.
Eye Irritation: Corrosive to eyes.
Skin Sensitization: Possible skin sensitizer based on animal tests

Acute Toxicity: This product is corrosive to all tissues contacted 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.

Mutagenicity: Not known or reported to be mutagenic.

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: Moderately toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: POTASSIUM SULFATE

Lepomis macrochirus (Bluegill sunfish) - 96 hr. EC50 (cell growth inhibition) 96 h LC50 = 3,550 mg/l
Pimephales promelas (fathead minnow) - 96 h LC50 = 680 mg/l
Daphnia magna (Water flea) - 48 h EC50= 720 mg/l



Ecological Toxicity Values for: Aluminum Sulfate

| | | |
|-----------------|---|---|
| Largemouth bass | - | 96 h LC50 = 250 mg/l (anhydrous aluminum sulfate) |
| Mosquito fish | - | 96 h LC50 = 235 mg/l (anhydrous aluminum sulfate) |

Ecological Toxicity Values for: POTASSIUM PEROXYDISULFATE

| | | |
|-------------------------------------|---|------------------------|
| Cyprinus carpio (Carp) | - | 48 h LC50 = 1,360 mg/l |
| Oncorhynchus mykiss (rainbow trout) | - | 48 h LC50 = 234 mg/l |
| Poecilia reticulata (guppy) | - | 48 h LC50 = 845 mg/l |
| Daphnia magna (Water flea) | - | 48 h LC50= 92 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 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 solid 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

UN number : 3260
Description of the goods : Corrosive solid, acidic, inorganic, n.o.s.
(Potassium hydrogenperoxomonosulphate)
Class : 8
Packing group : II
Labels : 8
Emergency Response : 154
Guidebook Number



TDG

UN number : 3260
Description of the goods : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
(Potassium hydrogenperoxomonosulphate)
Class : 8
Packing group : II
Labels : 8

IATA

UN number : 3260
Description of the goods : Corrosive solid, acidic, inorganic, n.o.s.
(Potassium hydrogenperoxomonosulphate)
Class : 8
Packing group : II
Labels : 8
Packing instruction (cargo aircraft) : 863
Packing instruction (passenger aircraft) : 859
Packing instruction (passenger aircraft) : Y844

IMDG-CODE

UN number : 3260
Description of the goods : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
(Potassium hydrogenperoxomonosulphate)
Class : 8
Packing group : II
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B

SECTION 15. REGULATORY INFORMATION

US State Regulations

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.
: Non-Chlorine Shock
: Aluminum Sulfate

Inventories



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

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

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. .