SAFETY DATA SHEET
according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

HTH Flocculant

Version 2.1 | Revision Date 2020.05.19 | Print Date 2020.05.19

SECTION 1. IDENTIFICATION

Product name : HTH Flocculant

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 treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Dermal) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face 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.
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.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Aluminium chloride	7446-70-0	13 - 17
Poly(diallyldimethylammonium chloride)	26062-79-3	1 - 3

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. If not breathing, give artificial respiration. Call for medical assistance.

In case of 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.

In case of eye contact : IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.

If swallowed : 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.
Most important symptoms and effects, both acute and delayed	:	None known.
Notes to physician	:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Choose extinguishing media suitable for surrounding materials.
Specific hazards during firefighting	:	Material will not ignite or burn.
Further information	:	Use water spray to cool unopened containers. 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	:	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. 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.

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. Isolate from incompatible materials. Do not freeze.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissi-	Basis

		exposure)	ble concentra-tion	
Aluminium chloride	7446-70-0	(Respirable fraction.)		ACGIH
		TWA (Respirable fraction.)	1 mg/m3	ACGIH
		REL	2 mg/m3 (as Al)	NIOSH/GUIDE

Engineering measures : Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.
No exposure limits exist for the constituents of this product.

Personal protective equipment

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

Hand protection

Remarks : Avoid contact with skin. Impervious gloves Boots Apron A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye protection : Chemical resistant goggles must be worn.
Face-shield

Skin and body protection : Impervious clothing

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Colour : clear
Odour : none
Odour Threshold : no data available
pH : 1.5 - 2.0

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 : no data available

Lower explosion limit : no data available

Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.13
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

Conditions to avoid	:	High temperatures Avoid freezing.
Incompatible materials	:	Oxidizing agents Metals Alkalis
Hazardous decomposition products	:	hydrochloric acid

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :

Eyes
Skin
Ingestion
Inhalation

Acute toxicity

Acute oral toxicity : LD50 (Rat): Believed to be > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): Believed to be > 2,000 mg/kg

Skin corrosion/irritation

Result: Corrosive to skin

Serious eye damage/eye irritation

Result: Corrosive to eyes

Respiratory or skin sensitisation
Remarks: Not believed to be sensitising to skin.

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

Toxicity to fish	:	LC50: Believed to be approximately 10.8 mg/l Method: Calculation method

Persistence and degradability
no data available

Bioaccumulative potential

Components:

Aluminium chloride:

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 : Slightly toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If this product becomes a waste, it will be a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	2581
Proper shipping name	:	Aluminum chloride, solution
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Emergency Response Guidebook Number	:	154
Environmental hazards	:	no

TDG

UN number	:	2581
Proper shipping name	:	ALUMINUM CHLORIDE SOLUTION
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IATA

UN number	:	2581
Proper shipping name	:	Aluminium chloride solution
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IMDG

UN number	:	2581
Proper shipping name	:	Aluminium chloride solution
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	:	2581
Proper shipping name	:	ALUMINIUM CHLORIDE SOLUTION
Transport hazard class	:	8
Packing group	:	III
Classification Code	:	C1
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no

RID

UN number	:	2581
Proper shipping name	:	ALUMINIUM CHLORIDE SOLUTION
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

This material does not contain any components with a CERCLA RQ.

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

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

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.
Aluminium chloride	7446-70-0

Pennsylvania Right To Know

Components	CAS-No.
Aluminium chloride	7446-70-0

New Jersey Right To Know

Components	CAS-No.
Aluminium chloride	7446-70-0
Poly(diallyldimethylammonium chloride)	26062-79-3

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:

REACH	:	Not in compliance with the inventory
CH INV	:	The formulation contains substances listed on the Swiss Inventory, Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL.
AUSTR	:	Not in compliance with the inventory
NZIOC	:	Not in compliance with the inventory
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory

KOREA	:	Not in compliance with the inventory
PHIL	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory

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 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.
Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.
Revision Date : 2020.05.19

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