



Certified to  
NSF/ANSI/CAN 60

MUL = 250 mg/L

**PURIFY**  
AN AQUASOL COMPANY

# PURIFY 2300

## SAFETY DATA SHEET

Revision date 24-Jun-2021

Revision Number 7

### 1. Identification

#### Product identifier

Product Name Purify 2300

#### Other means of identification

Product Code(s) 3204H

Synonyms Water and Wastewater Treatment Coagulant/Flocculant

#### Recommended use of the chemical and restrictions on use

Recommended use No information available

Restrictions on use No information available None known

#### Details of the supplier of the safety data sheet

##### Supplier Address

Purify  
1707 Townhurst Drive,  
Houston, TX 77043  
SDS Requests: 713-463-1929 Website: purifywt.com

Contact Point sales@purifywt.com

Emergency Telephone CHEMTREC: (800) 424-9300  
Outside USA - +1 (703) 527-3887 collect calls accepted

### 2. Hazard(s) identification

#### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Corrosive to metals	Category 1

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

**WARNING****Hazard statements**

Causes skin irritation  
 Causes serious eye irritation  
 May be corrosive to metals

**Appearance** Clear**Physical state** Liquid**Odor** No appreciable odor**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Keep only in original container

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation occurs: Get medical advice/attention  
 Take off contaminated clothing and wash before reuse  
 Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store in corrosive resistant container with a resistant inner liner

Conclusions are drawn from sources other than direct testing.

**Other information**

May be harmful in contact with skin.

**3. Composition/information on ingredients****Substance****Synonyms**

Water and Wastewater Treatment Coagulant/Flocculant.

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	50%	*
Aluminum Chlorohydrate	12042-91-0	50%	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret. While some components are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

**4. First-aid measures****Description of first aid measures****Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. Call physician immediately.

**Eye contact**

Immediately flush with plenty of water for at least 20 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve

maximum effectiveness. Seek immediate medical attention.

**Skin contact** Immediately wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.

**Ingestion** Seek medical attention immediately. Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms** Skin, eye and respiratory tract irritation. May cause redness and tearing of the eyes. Itching. Burning sensation. Rashes. Redness. Dermatitis. Coughing and/ or wheezing. Difficulty in breathing. Stomach pains.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### **5. Fire-fighting measures**

**Suitable Extinguishing Media** Water Spray, Carbon Dioxide, Foam, Dry Chemical.  
**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical** Thermal decomposition (as may be experienced in a fire) may release toxic and/or hazardous gases, such as HCl and Cl<sub>2</sub>.

#### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment for fire-fighters** Use self-contained breathing apparatus in confined areas; avoid breathing mist or spray.

### **6. Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Wear suitable protective clothing and gloves.

#### **Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills. Do not allow liquid to enter streams or waterways.

**Methods for cleaning up** Clear spills immediately. Contain large spill and remove using a vacuum truck. Soak up small spills with inert absorbent material and place in a labeled waste container for disposal. Ventilate area of leak or spill. Spills of solution are extremely slippery so all residue must be removed promptly.

**Prevention of secondary hazards** Do not permit run-off to get into sewers or surface waterways.

### **7. Handling and storage**

**Precautions for safe handling****Advice on safe handling**

Keep container closed when not in use. Keep away from heat and open flame. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Wear chemical splash goggles, gloves, and protective clothing when handling. Avoid breathing vapors or mists. Use with adequate ventilation and employ respiratory protection where mist or vapors may be generated. FOR INDUSTRIAL USE ONLY.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Do not store in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminum, mild steel, and stainless steel. Store in a cool, dry place away from direct heat. Keep in tightly closed container.

**Packaging materials**

Store in corrosion resistant container with a resistant inner liner.

**8. Exposure controls/personal protection****Control parameters****Exposure Limits**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Aluminum Chlorohydrate 12042-91-0	TWA: 1 mg/m <sup>3</sup> respirable particulate matter	-	-

**Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Appropriate engineering controls****Engineering controls**

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, 'Industrial Ventilation, A Manual of Recommended Practices', most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient. Ensure that eyewash stations and safety showers are close to the workstation location.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

**Hand protection**

Appropriate chemical resistant gloves should be worn.

**Skin and body protection**

Standard work clothing and work shoes.

**Respiratory protection**

If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

**Environmental exposure controls**

Do not allow liquid to enter streams or waterways.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Do not eat, drink or smoke when using this product.

**9. Physical and chemical properties****Information on basic physical and chemical properties****Physical state**

Liquid

<b>Appearance</b>	Clear	
<b>Color</b>	Colorless to yellow	
<b>Odor</b>	No appreciable odor	
<b>Odor threshold</b>	No information available	
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	3.5	As is
<b>Melting point / freezng point</b>	< -9.4 °C (15 °F)	None known
<b>Boiling point / boiling range</b>	~ 104 °C (220 °F)	No information available
<b>Flash point</b>	Not applicable No data available	No information available
<b>Evaporation rate</b>	No information available No data available	No information available
<b>Flammability (solid, gas)</b>	Not applicable No data available	No information available
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	No information available
<b>Relative vapor density</b>	No data available	No information available
<b>Relative density</b>	1.33 - 1.35	None known
<b>Water solubility</b>	Soluble below pH 4	No information available
<b>Solubility(ies)</b>	No information available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	Not applicable No data available	None known
<b>Decomposition temperature</b>	No information available	None known
<b>Kinematic viscosity</b>	No data available	No information available
<b>Dynamic viscosity</b>	<100 cps	Brookfield @ 25 °C
<b><u>Other information</u></b>		
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	
<b>Softening point</b>	No information available	
<b>Molecular weight</b>	No information available	
<b>VOC Content (%)</b>	No information available	
<b>Liquid Density</b>	11.0 - 11.3 lbs./gal.	
<b>Bulk density</b>	No information available	

## 10. Stability and reactivity

<b>Reactivity</b>	No data available.
<b>Chemical stability</b>	Stable.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	No.
<b>Conditions to avoid</b>	Avoid contact with metals such as iron, brass, copper, aluminum and mild steel.
<b>Incompatible materials</b>	Alkalis.
<b>Hazardous decomposition products</b>	Thermal decomposition (as may be experienced in a fire) may release toxic and/or hazardous gases such as HCl and Cl <sub>2</sub> .

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of mist or vapor may cause respiratory tract irritation.
<b>Eye contact</b>	May cause moderate eye irritation that can become severe with prolonged contact.

Prolonged exposure to Aluminum salts may cause conjunctivitis.

**Skin contact**

Prolonged and/or repeated contact may cause skin irritation.

**Ingestion**

May cause irritation of the mouth, throat and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms**

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing. Eye contact: Adverse symptoms may include the following: watering, redness, and irritation. Skin contact: Adverse symptoms may include the following: irritation and redness. Ingestion: Adverse symptoms may include the following: stomach pains, gastrointestinal irritation, nausea, vomiting and diarrhea.

**Acute toxicity****Numerical measures of toxicity**

No information available

<b>ATEmix (oral)</b>	18374 mg/kg
<b>ATEmix (dermal)</b>	4004 mg/kg

Conclusions are drawn from sources other than direct testing.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-
Aluminum Chlorohydrate 12042-91-0	= 9187 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Irritating to skin.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Respiratory or skin sensitization**

No information available.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

**Reproductive toxicity**

No information available.

**Developmental toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Aspiration hazard**

No information available.

**Other adverse effects**

No information available.

**Interactive effects**

No information available.

**12. Ecological information****Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	LC50	400 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	IC25	29.57 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Pimephales promelas (Fathead Minnow)	IC50	39.10 mg/L	48 hr, 3-brood, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	LC50	> 400 mg/L	96 hr, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	IC25	8.61 mg/L	96 hr, static, renewal	
EPA-821-R-02-012 and EPA-821-R-02-023	Ceriodaphnia dubia (Water Flea)	IC50	17.22 mg/L	96 hr, static, renewal	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Aluminum Chlorohydrate 12042-91-0	--	LC50 (96 h static) 100 - 500 mg/L (Brachydanio rerio)	-	-

**Persistence and degradability** Not determined. No information available.

**Bioaccumulation** No information available.

**Mobility** Not determined. No information available.

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Waste treatment methods

**Waste from residues/unused products** Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations.

**Contaminated packaging** Since empty containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**DOT** This product is excepted from DOT regulations under 49 CFR 173.154(d) when shipped by road or railway. The product exception is referenced in 49 CFR 172.101 Table. Packaging material must not be aluminum, steel or be degraded by this product

**TDG** Regulated  
**UN number or ID number** UN3264  
**UN proper shipping name** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)  
**Transport hazard class(es)** 8  
**Packing group** III

#### MEX

**Notes**

**Technical Name**

**Contact manufacturer.**

<b>IATA</b>	Regulated
UN number or ID number	UN3264
UN proper shipping name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)
Transport hazard class(es)	8
Packing group	III
ERG Code	8L

<b>IMDG</b>	Regulated
UN number or ID number	UN3264
UN proper shipping name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyaluminum Chloride Solution)
Transport hazard class(es)	8
Packing group	III
EmS-No	F-A, S-B

## 15. Regulatory information

### International Inventories

**TSCA** All ingredients are on the inventory or exempt from listing.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Aluminum Chlorohydrate	12042-91-0	Present	Active
Water	7732-18-5	Present	Active

**DSL/NDSL** All ingredients are on the DSL inventory or exempt from listing. None of the ingredients are on the NDSL inventory.

**EINECS/ELINCS** All ingredients are on the EINECS inventory or are exempt from listing. None of the ingredients are on the ELINCS inventory.

**ENCS** All ingredients are on the inventory or exempt from listing.

**IECSC** All ingredients are on the inventory or exempt from listing.

**KECL** All ingredients are on the inventory or exempt from listing.

**PICCS** All ingredients are on the inventory or exempt from listing.

**AICS** All ingredients are on the inventory or exempt from listing.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).



**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 1	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b>
<b>HMIS</b>	<b>Health hazards</b> 1	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> B

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

**Revision date** 24-Jun-2021  
**Revision Note** No information available.

**Disclaimer**

**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.

**End of Safety Data Sheet**