HALLIBURTON

SAFETY DATA SHEET

AQUA-CLEAR® AE

Revision Date: 02-Mar-2023 **Revision Number:** 30

1. Identification

Product identifier

Product Name AQUA-CLEAR® AE

Other means of identification

Hazardous Material Number: HM003457

Recommended use of the chemical and restrictions on use

Recommended Use Acid Enhancer / Antifoulant

Supplier details

Halliburton Energy Services
Av. Amazonas N37-29 y Villalengua Edif.,
Quito, Ecuador

Halliburton Energy Services
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Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

Classification of the hazardous chemical

Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage/Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335
Acute Aquatic Toxicity	Category 3 - H402

Label Elements

Hazard Pictograms

Signal Word: Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H402 - Harmful to aquatic life

Precautionary Statements

Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
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 [or shower].
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor/physician
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER and doctor/physician if you feel unwell.

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	**CAS Number**
Hydroxyacetic acid	79-14-1

Other hazards which do not result in classification

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

3. Composition/Information on Ingredients

Product Classification: Mixture

Substances	CAS Number	PERCENT (w/w)	GHS Classification
Hydroxyacetic acid	79-14-1	30 - 60%	Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 3 (H402)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First Aid Measures

Description of first aid measures

Inhalation If inhaled, move victim to fresh air and seek medical attention.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility should be immediately available

Skin Remove contaminated clothing and launder before reuse. In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation. Harmful if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable extinguishing media

Suitable Extinguishing Media

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

Physicochemical hazards arising from the chemical

Special exposure hazards in a fire

Reacts with metals to generate flammable hydrogen gas. Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.
See Section 8 for additional information.

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize to pH of 6-8. Scoop up and remove.

7. Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 36 months.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits

Substances	CAS Number	Venzuela	Colombia	Argentina
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable

Appropriate engineering controls

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection Acid gas respirator.

Hand Protection Impervious rubber gloves.

Skin Protection Full protective chemical resistant clothing.

Eye Protection Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls Do not allow material to contaminate ground water system.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State: Liquid **Color** Clear light amber

Odor: Mild burnt sugar **Odor Threshold:** No information available

Property Remarks/ - Method	Values
pH:	1.1
Freezing Point / Range	No data available
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	100 °C / 212 °F
Flash Point	> 100 °C (PMCC)
Evaporation rate	> 1
Vapor Pressure	21 mmHg
Vapor Density	No data available
Specific Gravity	1.09
Water Solubility	Miscible with water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

VOC Content (%) No data available

10. Stability and Reactivity

Reactivity

Not expected to be reactive.

Chemical stability
Stable

Possibility of hazardous reactions
Will Not Occur

Conditions to avoid
None anticipated

Incompatible materials
Strong alkalis. Sulfuric acid. Sulfides. Amines. Isocyanates. Strong oxidizers.

Hazardous decomposition products
Flammable hydrogen gas. Carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on possible routes of exposure
Principle Route of Exposure Eye or skin contact, inhalation.

Most Important Symptoms/Effects
Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation. Harmful if inhaled.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydroxyacetic acid	79-14-1	2040 mg/kg (Rat)	No data available	3.6 mg/L (Rat) 4h

Immediate, delayed and chronic health effects from exposure
Inhalation Harmful if inhaled. Causes severe respiratory irritation.
Eye Contact Causes eye burns Causes serious eye damage.
Skin Contact Causes severe burns.
Ingestion Causes burns of the mouth, throat and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause kidney damage.

Chronic Effects/Carcinogenicity Prolonged, excessive exposure may cause erosion of the teeth.

Substances	CAS Number	Skin corrosion/irritation
Hydroxyacetic acid	79-14-1	Skin, rabbit: Causes burns.

Substances	CAS Number	Serious eye damage/irritation
Hydroxyacetic acid	79-14-1	Eye, rabbit: Causes severe eye irritation which may damage tissue.

Substances	CAS Number	Skin Sensitization
Hydroxyacetic acid	79-14-1	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Hydroxyacetic acid	79-14-1	No information available

Substances	CAS Number	Mutagenic Effects
Hydroxyacetic acid	79-14-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Hydroxyacetic acid	79-14-1	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Hydroxyacetic acid	79-14-1	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal

		experiments.

Substances	CAS Number	STOT - single exposure
Hydroxyacetic acid	79-14-1	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Hydroxyacetic acid	79-14-1	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Hydroxyacetic acid	79-14-1	Not applicable

12. Ecological Information

Ecotoxicity

12.1. Toxicity

Ecotoxicity effects

Harmful to aquatic life.

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hydroxyacetic acid	79-14-1	ErC50 (72h) 44mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 164 mg/L (Pimephales promelas)	No information available	EC50 (48h) 114 mg/L (Daphnia magna) EC50 (48h) 58.5 mg/L (Acartia tonsa)

Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Hydroxyacetic acid	79-14-1	Readily biodegradable

Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Hydroxyacetic acid	79-14-1	Log Kow < 1.4

Mobility in soil

Substances	CAS Number	Mobility
Hydroxyacetic acid	79-14-1	No information available

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

Disposal methods

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information

Transportation Information

UN Number UN3265

UN proper shipping name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid)

Transport Hazard Class(es): 8

Packing Group: II

Environmental Hazards: Not applicable

IMDG/IMO

UN Number	UN3265
UN proper shipping name:	Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid)
Transport Hazard Class(es):	8
Packing Group:	II
Environmental Hazards:	Not applicable
EMS:	EmS F-A, S-B

IATA/ICAO

UN Number	UN3265
UN proper shipping name:	Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid)
Transport Hazard Class(es):	8
Packing Group:	II
Environmental Hazards:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Special precautions for user
None

15. Regulatory Information

International Agreements

Montreal Protocol - Ozone Depleting Substances:	Does not apply.
Stockholm Convention - Persistent Organic Pollutants:	Does not apply
Rotterdam Convention - Prior Informed Consent:	Does not apply.
Basel Convention - Hazardous Waste:	Does not apply.

NFPA Ratings:	Health 3, Flammability 0, Reactivity 0
HMIS Ratings:	Health 3, Flammability 0, Reactivity 0

16. Other Information

Revision Date: 02-Mar-2023
Revision Note
Update to Format

Key literature references and sources for data
www.ChemADVISOR.com/
OSHA
ECHA C&L

Key or legend to abbreviations and acronyms used in the safety data sheet
bw – body weight
CAS – Chemical Abstracts Service
EC10 – Effective Concentration 10%
EC50 – Effective Concentration 50%
EEC – European Economic Community
ErC50 – Effective Concentration growth rate 50%
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL0 – Lethal Loading 0%
LL50 – Lethal Loading 50%
MARPOL – International Convention for the Prevention of Pollution from Ships
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NTP – National Toxicology Program
OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic
PC – Chemical Product category
PEL – Permissible Exposure Limit
ppm – parts per million
PROC – Process category
STEL – Short Term Exposure Limit
h - hour
d - day

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End of Safety Data Sheet