

SAFETY DATA SHEET**Product Trade Name:** 7.5% HYDROCHLORIC ACID / 10% ACETIC ACID**Revision Date:** 10-Jun-2015**Revision Number:** 6**1. Identification****1.1. Product Identifier**

Product Trade Name: 7.5% HYDROCHLORIC ACID / 10% ACETIC ACID
Synonyms: None
Chemical Family: Acid Blend
Internal ID Code HM006234

1.2 Recommended use and restrictions on use

Application: Additive
Uses Advised Against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier Halliburton Energy Services Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Emergency Telephone: (281) 575-5000

Prepared By Chemical Stewardship
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number (281) 575-5000

2. Hazard(s) Identification**2.1 Classification in accordance with paragraph (d) of §1910.1200**

Skin Corrosion / Irritation	Category 1 A - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318

2.2. Label Elements**Hazard Pictograms**

Signal Word Danger

Hazard Statements H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Precautionary Statements

Prevention	P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed 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/shower P363 - Wash contaminated clothing before reuse P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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
Storage	P405 - Store locked up
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains Substances

Acetic acid
Hydrochloric acid

CAS Number

64-19-7
7647-01-0

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Acetic acid	64-19-7	10 - 30%	Skin Corr. 1A (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Flam. Liq. 3 (H226)
Hydrochloric acid	7647-01-0	5 - 10%	Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Met. Corr. 1 (H290)

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

4. First-Aid Measures**4.1. Description of first aid measures**

Inhalation	If inhaled, move victim to fresh air and seek medical attention.
Eyes	Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
Skin	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.

4.2 Most important symptoms/effects, acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special Exposure Hazards

Decomposition in fire may produce toxic gases. Reaction with steel and certain other metals generates flammable hydrogen gas. Do not allow runoff to enter waterways.

5.3 Special protective equipment and precautions for fire-fighters

Special Protective Equipment for Fire-Fighters

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

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. 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

7.1. Precautions for Safe Handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
------------	------------	--------------	---------------

Acetic acid	64-19-7	TWA: 10 ppm	TWA: 10 ppm STEL: 15 ppm
Hydrochloric acid	7647-01-0	TWA: 5 ppm	TWA: 2 ppm

8.2 Appropriate engineering controls**Engineering Controls**

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

8.3 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

Rubber boots. 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.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical State: Liquid

Color:

Clear colorless

Odor: Pungent acrid

Odor

No information available

Threshold:

PropertyValues

Remarks/ - Method

pH:

0.8

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

No data available

Flammability (solid, gas)

No data available

upper flammability limit

No data available

lower flammability limit

No data available

Evaporation rate

No data available

Vapor Pressure

26 mmHg

Vapor Density

No data available

Specific Gravity

No data available

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

9.2. Other information

VOC Content (%)

No data available

10. Stability and Reactivity**10.1. Reactivity**

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

None anticipated

10.5. Incompatible Materials

Strong alkalis.

10.6. Hazardous Decomposition Products

Flammable hydrogen gas. Chlorine.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation

May cause respiratory irritation.

Eye Contact

Causes severe eye irritation. May cause eye burns.

Skin Contact

Causes severe skin irritation. May cause skin burns.

Ingestion

Causes burns of the mouth, throat and stomach.

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

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	64-19-7	3310 mg/kg (Rat) 600 mg/kg (Rabbit) 4960 mg/kg (Mouse)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4h
Hydrochloric acid	7647-01-0	No data available	5010 mg/kg (Rabbit) > 5010 mg/kg (Rabbit) 1449 mg/kg (Mouse)	3124 mg/L (Rat) 1h 3.2 mg/L (Mouse) 8.3 mg/L (Rat) 1405 mg/L (Rat) 554 mg/L (Mouse)

Substances	CAS Number	Skin corrosion/irritation
Acetic acid	64-19-7	Corrosive to skin
Hydrochloric acid	7647-01-0	Causes severe burns

Substances	CAS Number	Eye damage/irritation
Acetic acid	64-19-7	Corrosive to eyes
Hydrochloric acid	7647-01-0	Causes severe burns

Substances	CAS Number	Skin Sensitization
Acetic acid	64-19-7	Not regarded as a sensitizer.
Hydrochloric acid	7647-01-0	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
------------	------------	---------------------------

Acetic acid	64-19-7	No information available
Hydrochloric acid	7647-01-0	No information available

Substances	CAS Number	Mutagenic Effects
Acetic acid	64-19-7	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects
Hydrochloric acid	7647-01-0	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Acetic acid	64-19-7	Did not show carcinogenic effects in animal experiments
Hydrochloric acid	7647-01-0	No data of sufficient quality are available.

Substances	CAS Number	Reproductive toxicity
Acetic acid	64-19-7	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility.
Hydrochloric acid	7647-01-0	Embryo and fetotoxicity has been observed in female rats exposed to maternally toxic levels of hydrogen chloride (450 mg/m ³ , 1hr.).

Substances	CAS Number	STOT - single exposure
Acetic acid	64-19-7	May cause respiratory irritation.
Hydrochloric acid	7647-01-0	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Acetic acid	64-19-7	Not applicable due to corrosivity of the substance.
Hydrochloric acid	7647-01-0	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Acetic acid	64-19-7	Not applicable
Hydrochloric acid	7647-01-0	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Acetic acid	64-19-7	EC50 90 mg/L (Microcystis aeruginosa) EC50 (72h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Skeletonema costatum)	LC50 79 mg/L (Pimephales promelas) LC50 75 mg/L (Pimephales promelas) LC50 (96h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Oncorhynchus mykiss)	NOEC (16h) 1150 mg/L (Pseudomonas putida)	EC50 47 mg/L (Daphnia magna) LC50 32 mg/L (Artemia salina) EC50 (48h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Daphnia magna) NOEC (21d) 31.4 - 37.9 mg/L (Daphnia magna) (reproduction)
Hydrochloric acid	7647-01-0	No information available	LC50 282 mg/L (Gambusia affinis) LC50 20.5 mg/L (Lepomis macrochirus) LC50 (96h) 3.25 – 3.5 (pH) (Lepomis macrochirus)	EC50 (3h) >= 5 and <= 5.5 (pH) (Activated sludge, domestic)	EC50 (48h) 4.9 (pH) (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Acetic acid	64-19-7	Readily biodegradable (> 95% @ 28d)
Hydrochloric acid	7647-01-0	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Acetic acid	64-19-7	-0.17 BCF = 3.16 (Calculated)
Hydrochloric acid	7647-01-0	0.25

12.4. Mobility in soil

Substances	CAS Number	Mobility
Acetic acid	64-19-7	No information available
Hydrochloric acid	7647-01-0	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods**

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

Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number: UN3264

UN Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Hydrochloric Acid, Acetic Acid)

Transport Hazard Class(es): 8

Packing Group: II

Environmental Hazards: Not applicable

NAERG: NAERG 154

US DOT Bulk

DOT (Bulk) Not applicable

Canadian TDG

UN Number: UN3264

UN Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Hydrochloric Acid, Acetic Acid)

Transport Hazard Class(es): 8

Packing Group: II

Environmental Hazards: Not applicable

IMDG/IMO

UN Number: UN3264

UN Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Hydrochloric Acid, Acetic Acid)

Transport Hazard Class(es): 8

Packing Group: II

Environmental Hazards:	Not applicable
EMS:	EmS F-A, S-B

IATA/ICAO

UN Number:	UN3264
UN Proper Shipping Name:	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Hydrochloric Acid, Acetic 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

US Regulations

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311,312) Hazard Class	Acute Health Hazard
EPA SARA (313) Chemicals	This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372: Hydrogen Chloride//7647-01-0
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 5828 Gallons based on Hydrochloric acid (CAS: 7647-01-0).
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of: Corrosivity D002
California Proposition 65	All components listed do not apply to the California Proposition 65 Regulation.
MA Right-to-Know Law	One or more components listed.
NJ Right-to-Know Law	One or more components listed.
PA Right-to-Know Law	One or more components listed.

Canadian Regulations

Canadian DSL Inventory	All components listed on inventory or are exempt.
-------------------------------	---

16. Other information**Preparation Information**

Prepared By Chemical Stewardship
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

Revision Date: 10-Jun-2015

Reason for Revision SDS sections updated:
2

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
h - hour
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet