HALLIBURTON

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

DCA-14007

Revision Date: 23-Sep-2015 Revision Number: 4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name DCA-14007 Internal ID Code HM008054

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Scale Inhibitor

1.3. Details of the supplier of the safety data sheet

Halliburton Energy Services

Halliburton House, Howemoss Place

Kirkhill Industrial Estate

Dvce

Aberdeen, AB21 0GN United Kingdom

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

1.4. Emergency telephone number

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §	45 - (EC)1272/2008
Europe	112
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

RECOEPTION (EO) NO 1212/2000	
Skin Corrosion / irritation	Category 1 B - (H314)
Serious Eye Damage / Eye Irritation	Category 1 - (H318)
Substances/mixtures corrosive to metal.	Category 1 - (H290)

2.2. Label Elements

Hazard Pictograms



Signal Word Danger

Hazard Statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/face protection

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 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

Contains

SubstancesCAS NumberHydroxyacetic acid79-14-1

2.3. Other Hazards

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).

SECTION 3: Composition/information on Ingredients

3.2. Mixtures Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Hydroxyacetic acid	201-180-5	79-14-1	60 - 100%	Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Corr. 1 (H318)	No data available

For the full text of the H-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Eyes In case of contact, or suspected contact, immediately flush eyes with plenty of

water for at least 15 minutes and get medical attention immediately after

flushing.

Skin Remove contaminated clothing and launder before reuse. In case of contact,

immediately flush skin with plenty of soap and water for at least 15 minutes. Get

medical attention.

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

attention.

4.2. Most Important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.

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

Notes to Physician Treat symptomatically

SECTION 5: Firefighting Measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards

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

5.3. Advice for firefighters

Special Protective Equipment for Fire-Fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

SECTION 7: Handling and Storage

7.1. 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.

7.2. 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.

7.3. Specific End Use(s)

Exposure Scenario No information available Other Guidelines No information available

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Exposure Limits

Substances	CAS Number	EU	UK	Netherlands	France
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable	Not applicable

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Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Hydroxyacetic acid	79-14-1	Not applicable	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL)

<u>Worker</u>

No information available.

General Population

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Controls

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

good cross ventilation.

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 Organic vapor/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

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid Color: Clear amber

Odor: Mild burnt sugar Odor Threshold: No information available

Property Values Values

Remarks/ - Method

pH: 0.5

Freezing Point/Range No data available Melting Point/Range No data available Boiling Point/Range 112 °C / 234 °F **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** No data available **Vapor Density** No data available

Specific Gravity 1.25

Water Solubility Miscible with water Solubility in other solvents No data available

Partition coefficient: n-octanol/water 0.0776

Autoignition TemperatureNo data availableDecomposition TemperatureNo data availableViscosityNo data availableExplosive PropertiesNo information availableOxidizing PropertiesNo information available

9.2. Other information

Molecular Weight 76.05

VOC Content (%) No data available

SECTION 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 oxidizers. Strong alkalis. Sulfuric acid. Ammonium compounds. Amines. Isocyanates. Contact with metals.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide. Flammable hydrogen gas.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Inhalation May cause respiratory irritation.

Eye Contact Causes eye burns. Skin Contact Causes severe burns.

Ingestion Causes burns of the mouth, throat and stomach. May cause abdominal pain, vomiting,

nausea, and diarrhea.

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

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		
Test species:		Rat				
Substances	CAS Number	Skin corrosion/irritation				
Hydroxyacetic acid	79-14-1	Skin, rabbit: Causes burns.				
Substances	CAS Number	Eye damage/irritation	Eye damage/irritation			
Hydroxyacetic acid	79-14-1	Eye, rabbit: Causes severe eye irr	itation which may damage tissue.			
Substances	CAS Number	Skin Sensitization				
Hydroxyacetic acid	79-14-1	Did not cause sensitization on lab	oratory 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 mutage	nic effects In vivo tests did not sho	ow mutagenic effects.		
Substances	CAS Number	Carcinogenic Effects				
Hydroxyacetic acid	79-14-1	Did not show carcinogenic effects	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 re	equiring classification.		
Substances	CAS Number	Aspiration hazard				
Hydroxyacetic acid	79-14-1	Not applicable				

SECTION 12: Ecological Information

12.1. Toxicity **Ecotoxicity Effects**

	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)

12.2. Persistence and degradability

Readily biodegradable

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

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

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

12.5. Results of PBT and vPvB assessment

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)

Substances	PBT and vPvB assessment
Hydroxyacetic acid	Not PBT/vPvB

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

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

Follow all applicable national or local regulations.

SECTION 14: Transport Information

IMDG/IMO

UN Number:

Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid) **UN Proper Shipping Name:**

Transport Hazard Class(es): 8 **Packing Group:** Ш

Environmental Hazards: Not applicable

RID

UN Number: UN3265

Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid) **UN Proper Shipping Name:**

Transport Hazard Class(es): **Packing Group:**

Environmental Hazards: Not applicable

ADR

UN Number: UN3265

UN Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid)

Transport Hazard Class(es): 8

Packing Group:

Environmental Hazards: Not applicable

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: 8

Environmental Hazards: Not applicable

14.1. UN Number: UN3265

14.2. UN Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glycolic Acid)

14.3. Transport Hazard Class(es): 8

14.4. Packing Group:

14.5. Environmental Hazards: Not applicable

14.6. Special Precautions for User: None

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

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

EINECS Inventory This product, and all its components, complies with EINECS

US TSCA Inventory

All components listed on inventory or are exempt.

Canadian DSL Inventory

All components listed on inventory or are exempt.

Leaend

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

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

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

Germany, Water Endangering

Classes (WGK)

WGK 1: Low hazard to waters.

15.2. Chemical Safety Assessment

No information available

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H332 - Harmful if inhaled

Key or legend to abbreviations and acronyms

bw - body weight

CAS - Chemical Abstracts Service

CLP - REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification,

Labelling and Packaging of substances and mixtures

EC - European Commission

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

REACH - REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the

Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL - Short Term Exposure Limit

SU - Sector of Use category

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 23-Sep-2015

Revision Note

SDS sections updated: 1

This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010

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End of Safety Data Sheet