

SAFETY DATA SHEET

Product Trade Name: LCA-1

Revision Date: 18-Jan-2018

Revision Number: 22

1. Identification

1.1. Product Identifier

Product Trade Name: LCA-1
Synonyms: None
Chemical Family: Organic hydrocarbon
Internal ID Code: HM006885

1.2 Recommended use and restrictions on use

Application: Solvent
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
Telephone: 1-281-871-6107

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada

Prepared By: Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number:

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Aspiration Toxicity	Category 1 - H304
Flammable liquids.	Category 4 - H227

2.2. Label Elements

Hazard Pictograms



Signal Word:	Danger
Hazard Statements	H227 - Combustible liquid H304 - May be fatal if swallowed and enters airways
Precautionary Statements	
Prevention	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	P280 - Wear protective gloves/eye protection/face protection P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting
Storage	P370 + P378 - In case of fire: Use water spray for extinction P403 + P235 - Store in a well-ventilated place. Keep cool
Disposal	P405 - Store locked up P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Hydrotreated distillate	Proprietary	60 - 100%	Asp. Tox. 1 (H304)

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	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.
Ingestion	Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

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

Carbon dioxide, dry chemical, foam.

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 in a fire

Use water spray to cool fire exposed surfaces. Decomposition in fire may produce harmful gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

5.3 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

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. 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. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Launder contaminated clothing before reuse. Wash hands after use. Ground and bond containers when transferring from one container to another.

Handling

Do not breathing vapors or spray mist.

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 oxidizers. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 24 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Hydrotreated distillate	Proprietary	Not applicable	Not applicable

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	If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Organic vapor respirator.
Hand Protection	Impervious rubber gloves.
Skin Protection	Rubber apron.
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions	None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid	Color	Translucent
Odor: Mild	Odor Threshold:	No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	No data available
Freezing Point / Range	- 60 °C / - 76 °F
Melting Point / Range	-68 °C / -90 °F
Boiling Point / Range	186-264 °C / 366.8-507.2 °F
Flash Point	79 °C / 174 °F PMCC
Flammability (solid, gas)	No data available
Upper flammability limit	7.0%
Lower flammability limit	0.6%
Evaporation rate	No data available
Vapor Pressure	0.16 mmHg
Vapor Density	5.7 (air = 1)
Specific Gravity	0.806
Water Solubility	Insoluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	223 °C / 434 °F
Decomposition Temperature	No data available
Viscosity	2.2 cSt @ 20C, ASTM D445
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
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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

Keep away from heat, sparks and flame.
Extremes of temperature and direct sunlight

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

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	Non-irritating to rabbit's eye
Skin Contact	May cause skin defatting with prolonged exposure. Can dry skin.
Ingestion	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrotreated distillate	Proprietary	>5000 mg/kg-bw (rat) (similar substance)	>2000 mg/kg-bw (rabbit) (similar substance)	>5.2 mg/L (rat, 4 h, vapor) (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Hydrotreated distillate		Non-irritating to the skin (similar substances)

Substances	CAS Number	Serious eye damage/irritation
Hydrotreated distillate		Non-irritating to rabbit's eye (similar substances)

Substances	CAS Number	Skin Sensitization
Hydrotreated distillate		Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Hydrotreated distillate		Based on available data, the classification criteria are not met.

Substances	CAS Number	Mutagenic Effects
Hydrotreated distillate		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Hydrotreated distillate		Did not show carcinogenic effects in animal experiments (similar substances)
Substances	CAS Number	Reproductive toxicity
Hydrotreated distillate		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Substances	CAS Number	STOT - single exposure
Hydrotreated distillate		No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	STOT - repeated exposure
Hydrotreated distillate		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Substances	CAS Number	Aspiration hazard
Hydrotreated distillate		Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

12. Ecological Information

12.1. Toxicity

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hydrotreated distillate	Proprietary	ErL50(72 h)>10000 mg/L (Skeletonema costatum)	LC50(96 h)>10000 mg/L (Scophthalmus maximus) NOELC(28 d)>1000 mg/L (fish)	No information available	LC50(48 h)>10000 mg/L (Acartia tonsa) NOEC(21 d)=1000 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Hydrotreated distillate	Proprietary	Readily biodegradable (68.1% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Hydrotreated distillate	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Hydrotreated distillate	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment 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

US DOT

UN Number

Not restricted

UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

US DOT Bulk

Not restricted in accordance with the terms and conditions of 49 CFR 173.120(b)(3).

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
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.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Hydrotreated distillate	Proprietary	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Hydrotreated distillate	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard
Fire Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Hydrotreated distillate	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ

Hydrotreated distillate	Proprietary	Not applicable
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EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

Substances	CAS Number	California Proposition 65
Hydrotreated distillate	Proprietary	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Hydrotreated distillate	Proprietary	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 1, Flammability 2, Reactivity 0

HMIS Ratings: Health 1, Flammability 2, Reactivity 0

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

16. Other information**Preparation Information**

Prepared By Chemical Stewardship
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e-mail: fdunexchem@halliburton.com

Revision Date: 18-Jan-2018

Reason for Revision SDS sections updated:
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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 used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
d - day
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
h - hour
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
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
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

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End of Safety Data Sheet