HALLIBURTON

SAFETY DATA SHEET

Product Trade Name:
ANHIB II INHIBITOR

Revision Date:
08-Jul-2019

Revision Number:
16

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier
Product Trade Name:
ANHIB II INHIBITOR
Synonyms
None
Chemical Family
Blend
Internal ID Code
HM000066

Recommended use and restrictions on use
Application
Corrosion Inhibitor
Uses advised against
No information available

Manufacturer's Name and Contact Details
Manufacturer/Supplier
Halliburton Energy Services
14th Floor, CitiBank Tower, Al-Qutayat Street
Dubai, UAE
Telephone Number : +971 43036666

Additional Information

Prepared By
Chemical Stewardship
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Emergency Telephone Number
1-760-476-3959
Global Incident Response Access Code: 334305
Contract Number: 14012

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion / Irritation	Category 3 - H316
Serious Eye Damage / Eye Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335
Acute Aquatic Toxicity	Category 3 - H402
Flammable liquids	Category 3 - H226

Hazard Pictograms

Signal Word
Danger

Hazard Statements
H226 - Flammable liquid and vapor
H316 - Causes mild skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H402 - Harmful to aquatic life

Precautionary Statements

Prevention
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take action to prevent static discharges.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
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
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P332 + P313 - If skin irritation occurs: Get medical advice/attention
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
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam

Storage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P403 + P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up

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

Contains

Substances	**CAS Number**
Ammonium bisulfite	10192-30-0
Proprietary Component	Proprietary
Isopropanol	67-63-0
Trimethylammonium chloride	593-81-7
Sodium phosphate, tribasic	7601-54-9

Additional Information
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

Substances	CAS Number	PERCENT (w/w)	GHS Classification
Ammonium bisulfite	10192-30-0	10 - 30%	Acute Tox. 5 (H303) Eye Irrit. 2A (H319) STOT SE 3 (H335) Aquatic Acute 3 (H402)
Proprietary Component	Proprietary	10 - 30%	Eye Corr. 1 (H318)
Isopropanol	67-63-0	5 - 10 %	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Trimethylammonium chloride	593-81-7	1 - 5%	Skin Irrit. 2 (H315) Eye Irrit. 2B (H320)
Sodium phosphate, tribasic	7601-54-9	1 - 5%	Skin Irrit. 2 (H315) Eye Irrit. 1 (H318) STOT SE 3 (H335)

4. FIRST AID MEASURES

First-aid Measures
Inhalation
If inhaled, move victim to fresh air and seek medical attention.
Skin
In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Eyes
Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
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 mild skin irritation. May cause respiratory irritation.

Indication of any immediate medical attention and special treatment needed
Notes to Physician
Not Applicable

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media
Water fog, carbon dioxide, foam, dry chemical.
Extinguishing media which must not be used for safety reasons
None known.

Specific hazards arising from the chemical
May be ignited by heat, sparks or flames Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases.

Special protective actions for fire-fighters
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. Remove sources of ignition. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

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. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

Additional Information
See Section 8 and 13 for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling
Use appropriate protective equipment. Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another.

Conditions for safe storage, including any incompatibilities
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

Control parameters
Exposure Limits

Substances	CAS Number	United Arab Emirates	Bahrain	Kuwait	Gulf Cooperation Council
Isopropanol	67-63-0	TWA: 400 ppm TWA: 983 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³	TWA: 400 ppm TWA: 983 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³	TWA: 980 mg/m³ TWA: 400 ppm STEL: 1225 mg/m³ STEL: 500 ppm	TWA: 400 ppm TWA: 983 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³

Appropriate 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
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
Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 8 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection
Rubber apron.
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

Physical State:
Liquid
Color
Red
Odor:
Pungent
Odor Threshold:
No information available
pH:
4.5 – 5.2
Specific Gravity
1.16
Freezing Point/Range (°C):
No information available
Pour Point/Range (C):
No information available
Boiling Point/Range (C):
No information available
Flash Point/Range (°C):
23
Flash Point Method:
(PMCC)
Flammability Limits in Air - Lower (%):
No information available
Flammability Limits in Air - Upper (%):
No information available
Autoignition Temperature (°C):
No information available
Evaporation Rate (Butyl Acetate=1):
No information available
Vapor Pressure @ 20 C (mmHg):
89
Vapor Density (Air=1):
No information available
Water Solubility
Soluble in water
Decomposition Temperature (C):
No information available
Viscosity, Dynamic @ 20 C (centipoise):
No information available
Viscosity, Kinematic @ 20 C (centistokes):
No information available
Partition Coefficient/n-Octanol/Water:
No information available
Molecular Weight (g/mole):
No information available

10. STABILITY AND REACTIVITY

Reactivity

Not expected to be reactive.

Chemical Stability
Stable

Possibility of hazardous reactions
Will Not Occur

Conditions to Avoid
Keep away from heat, sparks and flame.

Incompatible materials
Strong oxidizers.

Hazardous decomposition products
Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.

Additional Guidelines
Not Applicable

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Inhalation
Causes moderate respiratory irritation.

Eye Contact
Causes severe eye irritation which may damage tissue.

Skin Contact
Causes mild skin irritation.

Ingestion
Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

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

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium bisulfite	10192-30-0	11200 mg/kg 2610 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat) (similar substance)	> 5.5 mg/L (Rat) 4h (similar substance)
Proprietary Component	Proprietary	No data available	No data available	No data available
Isopropanol	67-63-0	4.7 mg/kg-bw (rat)	12870 mg/kg-bw (rabbit)	72.6 mg/L (Rat, 4h, vapor)
Trimethylammonium chloride	593-81-7	3090 mg/kg (Rat)	> 5000 mg/kg (Rat) (similar substance)	No data available
Sodium phosphate, tribasic	7601-54-9	> 2000 mg/kg (rat)	> 2000 mg/kg (rat, similar substance)	> 0.83 mg/L (rat, saturation, similar substance)

Substances	CAS Number	Skin corrosion/irritation
Ammonium bisulfite	10192-30-0	Not irritating to skin in rabbits.
Proprietary Component		No data of sufficient quality are available.
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Trimethylammonium chloride	593-81-7	Causes skin irritation.
Sodium phosphate, tribasic	7601-54-9	Causes moderate skin irritation. (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Ammonium bisulfite	10192-30-0	Eye, rabbit: Causes mild eye irritation. (similar substances)

Proprietary Component		May cause moderate to severe eye irritation.
Isopropanol	67-63-0	Causes moderate eye irritation (Rabbit)
Trimethylammonium chloride	593-81-7	Causes eye irritation.
Sodium phosphate, tribasic	7601-54-9	Causes severe eye irritation which may damage tissue.

Substances	**CAS Number**	**Skin Sensitization**
Ammonium bisulfite	10192-30-0	Did not cause sensitization on laboratory animals (mouse) (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Trimethylammonium chloride	593-81-7	Not regarded as a sensitizer. (similar substances)
Sodium phosphate, tribasic	7601-54-9	Did not cause sensitization on laboratory animals (similar substances)

Substances	**CAS Number**	**Respiratory Sensitization**
Ammonium bisulfite	10192-30-0	No information available
Proprietary Component		No information available
Isopropanol	67-63-0	No information available
Trimethylammonium chloride	593-81-7	No information available
Sodium phosphate, tribasic	7601-54-9	No information available

Substances	**CAS Number**	**Mutagenic Effects**
Ammonium bisulfite	10192-30-0	Did not show mutagenic effects in animal experiments (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Trimethylammonium chloride	593-81-7	In vitro tests did not show mutagenic effects (similar substances)
Sodium phosphate, tribasic	7601-54-9	Not regarded as mutagenic. In vitro tests did not show mutagenic effects (similar substances)

Substances	**CAS Number**	**Carcinogenic Effects**
Ammonium bisulfite	10192-30-0	Did not show carcinogenic or teratogenic effects in animal experiments (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Trimethylammonium chloride	593-81-7	No information available
Sodium phosphate, tribasic	7601-54-9	No information available

Substances	**CAS Number**	**Reproductive toxicity**
Ammonium bisulfite	10192-30-0	Animal testing did not show any effects on fertility. (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	Animal testing did not show any effects on fertility.
Trimethylammonium chloride	593-81-7	No data of sufficient quality are available.
Sodium phosphate, tribasic	7601-54-9	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility. (similar substances)

Substances	**CAS Number**	**STOT - single exposure**
Ammonium bisulfite	10192-30-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Trimethylammonium chloride	593-81-7	No significant toxicity observed in animal studies at concentration requiring classification.
Sodium phosphate, tribasic	7601-54-9	May cause disorder and damage to the Respiratory system.

Substances	**CAS Number**	**STOT - repeated exposure**
Ammonium bisulfite	10192-30-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Proprietary Component		No information available
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Trimethylammonium chloride	593-81-7	No data of sufficient quality are available.
Sodium phosphate, tribasic	7601-54-9	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	**CAS Number**	**Aspiration hazard**
Ammonium bisulfite	10192-30-0	Not applicable
Proprietary Component		Not applicable
Isopropanol	67-63-0	Not applicable
Trimethylammonium chloride	593-81-7	Not applicable

Sodium phosphate, tribasic	7601-54-9	Not applicable

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Harmful to aquatic life.

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Ammonium bisulfite	10192-30-0	ErC50 (72h) 43.8 mg/L (Desmodesmus subspicatus) (similar substance)	LC50 5000 mg/L (Lepomis macrochirus) LC50 (96h) 681.2 mg/L (Danio rerio) (similar substance) LC50 (96h) 316 mg/L (Leuciscus idus) (similar substance) NOEC (34d) => 316 mg/L (Danio rerio) (similar substance)	EC50 (17h) 410 mg/L (Pseudomonas putida) (similar substance) EC50 (17h) 65 mg/L (Pseudomonas putida) (similar substance)	EC50 (48h) >1000 mg/L (Daphnia magna) EC50 (48 hr) 89 mg/L (Daphnia magna) (similar substance) NOEC (21d) > 10 mg/L (Daphnia magna) (reproduction) (similar substance)
Proprietary Component	Proprietary	No information available	No information available	No information available	No information available
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (meanextinction value)(Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48 h)=2285 mg/L (Daphnia sp.) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Trimethylammonium chloride	593-81-7	EC50 (96h) 150 mg/L (Desmodesmus subspicatus) (similar substance)	EC50 (48h) 610 mg/L (Leuciscius idus) (similar substance) LC50 (48h) 1000 mg/L (Oryzias latipes) (similar substance)	No information available	EC50 (48h) 140 mg/L (Daphnia magna) (similar substance)
Sodium phosphate, tribasic	7601-54-9	EC50 (72h) > 100 mg/L (Desmodesmus subspicatus)	LC50 (96h) > 100 mg/L (Oncorhynchus mykiss)	NOEC (3h) > 1000 mg/L (Activated sludge)	EC50 (48h) > 100 mg/L (Daphnia magna)

Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Ammonium bisulfite	10192-30-0	The methods for determining biodegradability are not applicable to inorganic substances.
Proprietary Component	Proprietary	No information available
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Trimethylammonium chloride	593-81-7	(92% @ 14d) (similar substance)
Sodium phosphate, tribasic	7601-54-9	No information available

Bioaccumlation potential

Substances	CAS Number	Bioaccumulation
Ammonium bisulfite	10192-30-0	No information available
Proprietary Component	Proprietary	No information available
Isopropanol	67-63-0	LogPow < 4.5
Trimethylammonium chloride	593-81-7	-2.73
Sodium phosphate, tribasic	7601-54-9	No information available

Mobility in soil

Substances	CAS Number	Mobility
Ammonium bisulfite	10192-30-0	No information available
Proprietary Component	Proprietary	No information available
Isopropanol	67-63-0	No information available
Trimethylammonium chloride	593-81-7	No information available

Sodium phosphate, tribasic	7601-54-9	No information available

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

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.
Other Information
No information available

14. TRANSPORT INFORMATION

UN Number
UN1993

UN proper shipping name:
Flammable Liquid, N.O.S.
(Contains Isopropanol)

Transport Hazard Class(es):
3

Packing Group:
III

Environmental Hazards:
Not applicable

Special Precautions for User
None

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

15. REGULATORY INFORMATION

Regulatory Information
This SDS was prepared in accordance with United Nations "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" and its revisions.

16. OTHER INFORMATION

Key literature references and sources for data
www.ChemADVISOR.com/

Revision Date:
08-Jul-2019
Revision Note
Update to Format

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End of Safety Data Sheet