

## SAFETY DATA SHEET

**Product Trade Name:**  
**AS-7 ANTI-SLUDGING AGENT**

**Revision Date:**  
13-Oct-2021

**Revision Number:**  
33

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

**Product Identifier**

**Product Trade Name:**  
AS-7 ANTI-SLUDGING AGENT

**Synonyms**

None

**Chemical Family**

Blend

**Internal ID Code**

HM000080

**Recommended use and restrictions on use**

**Application**

Anti-sludging Agent

**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  
e-mail: fdunexchem@halliburton.com

**Emergency Telephone Number**

1-760-476-3959  
Global Incident Response Access Code: 334305  
Contract Number: 14012

### 2. HAZARDS IDENTIFICATION

**Classification System**

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

**Classification**

Acute Oral Toxicity	Category 4 - H302
Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 2 - H371

Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 3 - H412
Flammable liquids	Category 3 - H226

**Hazard Pictograms****Signal Word**

Danger

**Hazard Statements**

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H360 - May damage fertility or the unborn child  
H371 - May cause damage to organs  
H400 - Very toxic to aquatic life  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements****Prevention**

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
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.  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/eye protection/face protection

**Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P330 - Rinse mouth  
P302 + P352 - IF ON SKIN: Wash with plenty of water.  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P362 + P364 - Take off contaminated clothing and wash before reuse  
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  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P370 + P378 - In case of fire: Use water spray for extinction  
P391 - Collect spillage

**Storage**

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**

Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)  
 Ethoxylated Alcohol  
 Methanol  
 Morpholine

**CAS Number**

12068-08-5  
 Proprietary  
 67-56-1  
 110-91-8

**Additional Information**

None known

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances	CAS Number	PERCENT (w/w)	GHS Classification
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	30 - 60%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412)
Ethoxylated Alcohol	Proprietary	30 - 60%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)
Methanol	67-56-1	5 - 10 %	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)
Morpholine	110-91-8	1 - 5%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1 (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 3 (H402) Flam. Liq. 3 (H226)

**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**

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

**Ingestion**

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

**Most important symptoms and effects, both acute and delayed**

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to internal organs.

**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. Wear self-contained breathing apparatus in enclosed areas.

**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**

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. 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 container closed when not in use. Product has a shelf life of 60 months.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Limits**

Substances	CAS Number	United Arab Emirates	Bahrain	Kuwait	Gulf Cooperation Council
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Not applicable	Not applicable	Not applicable	Not applicable
Ethoxylated Alcohol	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable
Methanol	67-56-1	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup>	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup>	TWA: 260 mg/m <sup>3</sup> TWA: 200 ppm STEL: 325 mg/m <sup>3</sup> STEL: 250 ppm	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup>
Morpholine	110-91-8	TWA: 20 ppm	TWA: 20 ppm	TWA: 70.0 mg/m <sup>3</sup>	TWA: 20 ppm

		TWA: 71 mg/m <sup>3</sup>	TWA: 71 mg/m <sup>3</sup>	TWA: 20.0 ppm STEL: 105 mg/m <sup>3</sup> STEL: 30.0 ppm	TWA: 71 mg/m <sup>3</sup>
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**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. Positive pressure self-contained breathing apparatus if methanol is released.

**Hand Protection**

Chemical-resistant protective gloves (EN 374) Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 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**

Clear amber

**Odor:**

Alcohol

**Odor Threshold:**

No information available

**pH:**

7.1

**Specific Gravity**

1.04

**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):**

32 °C

**Flash Point Method:**

SETA

**Flammability Limits in Air - Lower (%):**

6.7

**Flammability Limits in Air - Upper (%):**

36

**Autoignition Temperature (°C):**

No information available

**Evaporation Rate (Butyl Acetate=1):**

No information available

**Vapor Pressure**

190 mmHg

**Vapor Density (Air=1):**

No information available

**Water Solubility**

Dispersible

**Decomposition Temperature (C):**

No information available

**Viscosity, Dynamic:**

No data available

**Viscosity, Kinematic:**

No information available

**Partition Coefficient/n-Octanol/Water:**

0.61

**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**

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

**Eye Contact**

Causes severe eye irritation May cause eye burns.

**Skin Contact**

Causes moderate skin irritation.

**Ingestion**

Harmful if swallowed. Irritation of the mouth, throat, and stomach. Ingestion may result in blindness. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

**Chronic Effects/Carcinogenicity**

May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard. May cause damage to organs

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	1080 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat) (similar substance)	> 0.31 mg/L (Rat) 4h (similar substance)
Ethoxylated Alcohol	Proprietary	1600 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat)(similar substance) 2500 mg/kg (Rabbit)(similar substance)	No toxicity at saturation (Similar substance)
Methanol	67-56-1	300 mg/kg-bw (human) < 790 to 13,000 mg/kg (rat)	1000 mg/kg-bw (human) 17,100 mg/kg (rabbit)	10 mg/L (human, vapor, 4h)
Morpholine	110-91-8	1050 mg/kg (Rat) 1600 mg/kg (Rat)	310 mg/kg (Rabbit) 500 mg/kg (Rabbit)	7.8 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Skin, rabbit: Causes moderate skin irritation. (similar substances)
Ethoxylated Alcohol		May cause moderate skin irritation.
Methanol	67-56-1	Non-irritating to the skin (Rabbit)
Morpholine	110-91-8	Skin, rabbit: Extremely corrosive and destructive to tissue

Substances	CAS Number	Serious eye damage/irritation
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Eye, rabbit: Causes severe eye irritation which may damage tissue. (similar substances)
Ethoxylated Alcohol		May cause severe eye irritation.
Methanol	67-56-1	Non-irritating to the eye (Rabbit)
Morpholine	110-91-8	Eye, rabbit: Corrosive to eyes Causes severe eye irritation. Will damage tissue.

Substances	CAS Number	Skin Sensitization
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Ethoxylated Alcohol		Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)
Morpholine	110-91-8	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No information available
Ethoxylated Alcohol		No information available
Methanol	67-56-1	No information available
Morpholine	110-91-8	No information available

Substances	CAS Number	Mutagenic Effects
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)
Ethoxylated Alcohol		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)
Methanol	67-56-1	The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.
Morpholine	110-91-8	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
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Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Did not show carcinogenic effects in animal experiments (similar substances)
Ethoxylated Alcohol		Did not show carcinogenic effects in animal experiments (similar substances)
Methanol	67-56-1	No data of sufficient quality are available.
Morpholine	110-91-8	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Ethoxylated Alcohol		Animal testing did not show any effects on fertility. (similar substances)
Methanol	67-56-1	Based on available data, the classification criteria are not met. Experiments have shown reproductive toxicity effects on laboratory animals
Morpholine	110-91-8	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
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No data of sufficient quality are available.
Ethoxylated Alcohol		No data of sufficient quality are available.
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)
Morpholine	110-91-8	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Ethoxylated Alcohol		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Methanol	67-56-1	Causes damage to organs through prolonged or repeated exposure: Central Nervous System (CNS)
Morpholine	110-91-8	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Not applicable
Ethoxylated Alcohol		No information available
Methanol	67-56-1	Not applicable
Morpholine	110-91-8	Not applicable

## 12. ECOLOGICAL INFORMATION

### Toxicity

**Ecotoxicity effects** Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	LC50 (96h) 29 mg/L (Selenastrum capricornutum) NOEC (4d) 0.3 mg/L (Microcystis aeruginosa)	LC50 (96h) 1.67 mg/L (Lepomis macrochirus) NOEC (28d) 1 mg/L (Lepomis macrochirus)	No information available	EC50 (48h) 1.62 mg/L (Daphnia magna) NOEC (21d) 1.18 mg/L (Daphnia magna)
Ethoxylated Alcohol	Proprietary	EC50 (96h) 0.7 mg/L (Selenastrum capricornutum) (Similar substance)	LC50 (96h) 1.4 mg/L (Pimephales promelas) (similar substances)	No information available	EC50(48h) 0.39mg/L (Ceriodaphnia dubia)(Similar substances)
Methanol	67-56-1	EC50 (96 h) =22000 mg/L (Pseudokirchnerella subcapitata) NOEC (8 d) =8000 mg/L (Scenedesmus quadricauda)	LC50(96 h)=15400 mg/L (Lepomis macrochirus) EC50 (200h)=14536 mg/L (Oryzias latipes)	No information available	NOEC(21 d)=208 mg/L (Daphnia magna) EC50 (48h)=22200 mg/L (Daphnia obtuse)



Morpholine	110-91-8	EC50 (96h) 28 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) 83 mg/L (Pimephales promelas) LC50 (96h) 180 mg/L (Oncorhynchus mykiss) LC50 (96h) 240 mg/L (Oncorhynchus mykiss) LC50 (96h) 380 mg/L (Oncorhynchus mykiss)	EC20 (30min) >1000 mg/L (Activated sludge, industrial)	EC50 (48h) 45 mg/L (Daphnia magna) EC50 (48h) 207 mg/L (Daphnia magna)
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**Persistence and degradability**

Substances	CAS Number	Persistence and Degradability
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	Readily biodegradable
Ethoxylated Alcohol	Proprietary	No information available
Methanol	67-56-1	Readily biodegradable (95% @ 20d)
Morpholine	110-91-8	Readily biodegradable

**Bioaccumulation potential**

Substances	CAS Number	Bioaccumulation
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No information available
Ethoxylated Alcohol	Proprietary	No information available
Methanol	67-56-1	Not Bioaccumulative; BCF=1
Morpholine	110-91-8	-0.86

**Mobility in soil**

Substances	CAS Number	Mobility
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No information available
Ethoxylated Alcohol	Proprietary	No information available
Methanol	67-56-1	No information available
Morpholine	110-91-8	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**

UN2924

**UN proper shipping name:**Flammable Liquid, Corrosive, N.O.S.  
(Contains Methanol, Amine Salt)**Transport Hazard Class(es):**

3 (8)

**Packing Group:**

III

**Environmental Hazards:**

Marine Pollutant  
(Contains Ethoxylated Alcohol)

**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.

**NFPA Ratings:**

Health 3, Flammability 3, Reactivity 0

**16. OTHER INFORMATION****Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)  
OSHA  
ECHA C&L

**Revision Date:**

13-Oct-2021

**Revision Note**

SDS sections updated:  
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**Disclaimer Statement**

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**End of Safety Data Sheet**