

MATERIAL SAFETY DATA SHEET

Product Trade Name: AS-7 ANTI-SLUDGING AGENT

Revision Date: 07-Jan-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: AS-7 ANTI-SLUDGING AGENT
Synonyms: None
Chemical Family: Blend
Application: Anti-sludging Agent

Manufacturer/Supplier Halliburton Energy Services
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Emergency Telephone: (281) 575-5000

Prepared By Chemical Compliance
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	30 - 60%	Not applicable	Not applicable
Ethoxylated Alcohol	Proprietary	30 - 60%	Not applicable	Not applicable
Morpholine	110-91-8	1 - 5%	TWA: 20 ppm Skin	20 ppm Skin
Methanol	67-56-1	5 - 10%	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye, skin, and respiratory burns. May cause headache, dizziness, and other central nervous system effects. May be fatal if swallowed. May cause blindness. May be absorbed through the skin. Repeated overexposure may cause liver and kidney effects. Flammable.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get 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, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Ingestion	Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.
Notes to Physician	Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	90
Flash Point/Range (C):	32
Flash Point Method:	PMCC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	6.7
Flammability Limits in Air - Upper (%):	36

Fire Extinguishing Media Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards 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 toxic gases.

Special Protective Equipment for Fire-Fighters Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 3, Flammability 3, Reactivity 0
HMIS Ratings: Health 0, Flammability 3, Reactivity 3

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

Environmental Precautionary Measures Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption 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

Handling Precautions 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.

Storage Information 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

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

Respiratory Protection	Positive pressure self-contained breathing apparatus if methanol is released.
Hand Protection	Impervious rubber gloves.
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
pH:	7.1
Specific Gravity @ 20 C (Water=1):	1.04
Density @ 20 C (lbs./gallon):	8.66
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	190
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Disperses
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	0.61
Molecular Weight (g/mole):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers.
Hazardous Decomposition Products	Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation. Ingestion.
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Symptoms related to exposure

Acute Toxicity**Inhalation**

Causes severe 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

May cause skin burns. May be absorbed through the skin and contribute to the symptoms listed under ingestion.

Ingestion

Causes burns of the mouth, throat and stomach. May be fatal or cause blindness if swallowed. 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

Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen damage. May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard.

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	No data available	No data available	No data available
Ethoxylated Alcohol	Proprietary	No data available	No data available	No data available
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
Methanol	67-56-1	> 1187 - 2769 mg/kg (Rat) 3000 mg/kg (Monkey) 300 mg/kg (Human)	15800 mg/kg (Rabbit) 393 mg/kg (Primate)	87.5 mg/L (Rat) 6h vapour 128.2 mg/L (Rat) 4h vapour 83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h 10 mg/L (Human)

12. ECOLOGICAL INFORMATION**Ecotoxicological Information****Ecotoxicity Product**

Acute Fish Toxicity: Not determined
Acute Crustaceans Toxicity: TLM96: 10-33 ppm (Crangon crangon)
Acute Algae Toxicity: Not determined

Ecotoxicity Substance

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	No information available	No information available	No information available	No information available
Ethoxylated Alcohol	Proprietary	No information available	No information available	No information available	No information available
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)
Methanol	67-56-1	EC50(96h): ca. 22000 mg/L (Pseudokirchneriella subcapitata, Growth rate)	LC50: 28200 mg/L (Pimephales promelas) LC50(96h): 12700 – 15400 mg/L (Lepomis macrochirus) 200 hr NOEC for % Embryo-cardiovascular for stage 2 = 15800 mg/L	IC50(3h): > 1000 mg/L (activated sludge)	EC50(96h): 18260 mg/L (Daphnia magna) NOEC(21d): 122 mg/L (Daphnia magna, Reproduction)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No information available
Ethoxylated Alcohol	Proprietary	No information available
Morpholine	110-91-8	Readily biodegradable
Methanol	67-56-1	Readily biodegradable (95-97% @ 20d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Benzenesulfonic acid, dodecyl-, compd. with morpholine (1:1)	12068-08-5	No information available
Ethoxylated Alcohol	Proprietary	No information available
Morpholine	110-91-8	-0.86
Methanol	67-56-1	-0.77 BCF 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Morpholine	Not PBT/vPvB
Methanol	Not PBT/vPvB

12.6. Other adverse effects

13. DISPOSAL CONSIDERATIONS

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: UN2924
UN Proper Shipping Name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Amine Salt)
Transport Hazard Class(es): 3
Subsidiary Hazard: (8)
Packing Group: III
NAERG: NAERG 132

US DOT Bulk

DOT (Bulk) Not applicable

Canadian TDG ul0

UN Number: UN2924
UN Proper Shipping Name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Amine Salt)
Transport Hazard Class(es): 3
Subsidiary Hazard: (8)
Packing Group: III

IMDG/IMO

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Amine Salt)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	III
EMS:	EmS F-E, S-C

IATA/ICAO

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Amine Salt)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	III

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

Special Precautions for User: None

Labels: Flammable Liquid
Corrosive

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
Chronic Health Hazard
Fire 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: Methanol//67-56-1

EPA CERCLA/Superfund Reportable Spill Quantity EPA Reportable Spill Quantity is 8325 Gallons based on Methanol (CAS: 67-56-1).

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:

Ignitability D001

California Proposition 65 The California Proposition 65 regulations apply to this product.

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.
WHMIS Hazard Class	B2 Flammable Liquids D1B Toxic Materials D2A Very Toxic Materials D2B Toxic Materials E Corrosive Material

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS

Not applicable

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 Compliance at 1-580-251-4335.

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