

SAFETY DATA SHEET

Product Trade Name:
AF-61

Revision Date:
30-Oct-2019

Revision Number:
17

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

Product Identifier

Product Trade Name:

AF-61

Synonyms

None

Chemical Family

Blend

Internal ID Code

HM000050

Recommended use and restrictions on use

Application

Emulsifier

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

Telephone: 1-281-871-6107

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Emergency Telephone Number

1-760-476-3959

Global Incident Response Access Code: 334305

Contract Number: 14012

2. HAZARDS IDENTIFICATION

Classification

Aspiration Category	Category 1 - H304
Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Carcinogenicity	Category 2 - H351
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336
Acute Aquatic Toxicity	Category 2 - H401

Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids	Category 4 - H227

Hazard Pictograms**Signal Word**

Danger

Hazard Statements

H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H401 - Toxic to aquatic life
H411 - Toxic 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.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
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

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P331 - Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor/physician
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam
P391 - Collect spillage

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**

Heavy aromatic petroleum naphtha
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortall-oil

CAS Number

64742-94-5
68910-70-3

alkyl-1-(2-tall-oil aminoethyl), chlorides
Naphthalene

91-20-3

Additional Information

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	GHS Classification
Heavy aromatic petroleum naphtha	64742-94-5	30 - 60%	STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortall-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	30 - 60%	Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335)
Naphthalene	91-20-3	1 - 5%	Acute Tox. 4 (H302) Carc. 2 (H351) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Sol. 2 (H228)

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 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

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.

Most important symptoms and effects, both acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation. May cause headache, dizziness, and other central nervous system effects. Potential carcinogen.

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

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. Ensure adequate ventilation. Remove sources of ignition. Avoid contact with skin, eyes and clothing. Avoid breathing vapors.

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

Additional Information

See Section 8 and 13 for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling

Use appropriate protective equipment. Ensure adequate ventilation. Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.

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 36 months. Keep from heat, sparks, and open flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Substances	CAS Number	United Arab Emirates	Bahrain	Kuwait	Gulf Cooperation Council
Naphthalene	91-20-3	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³	TWA: 50.0 mg/m ³ TWA: 10.0 ppm STEL: 75.0 mg/m ³ STEL: 15.0 ppm	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³

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

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

Dark brown

Odor:

Aromatic hydrocarbon

Odor Threshold:

No information available

pH:

4.15

Specific Gravity

0.959

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):

No information available

Flash Point Method:

TCC

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):

No information available

Vapor Density (Air=1):

> 1

Water Solubility

Insoluble 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

Hydrogen chloride. Oxides of nitrogen. Carbon monoxide and carbon dioxide.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION**Information on Toxicological Effects****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 which may damage tissue.

Skin Contact

Causes severe burns.

Ingestion

Aspiration can be a hazard if this material is 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

The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans).

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Heavy aromatic petroleum naphtha	64742-94-5	>5000 mg/kg-bw (rat)	>2000 mg/kg-bw (rabbit)	> 4.778 mg/L (rat, 4 h, vapour, saturated)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortall-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No data available	No data available	No data available
Naphthalene	91-20-3	490 mg/kg (Rat) 1110 mg/kg (Rat)	1120 mg/kg (Rabbit) 20 g/kg (Rabbit)	340 mg/m ³ (Rat) 1 h

Substances	CAS Number	Skin corrosion/irritation
Heavy aromatic petroleum naphtha	64742-94-5	Non-irritating to the skin (Rabbit) (similar substances)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortall-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	Causes severe skin burns
Naphthalene	91-20-3	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Heavy aromatic petroleum naphtha	64742-94-5	Non-irritating to rabbit's eye (similar substances)

Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	Causes severe irritation and or burns
Naphthalene	91-20-3	May cause mechanical irritation to eye. (human) Non-irritating to rabbit's eye

Substances	CAS Number	Skin Sensitization
Heavy aromatic petroleum naphtha	64742-94-5	Patch test on human volunteers did not demonstrate sensitization properties Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	No information available

Substances	CAS Number	Mutagenic Effects
Heavy aromatic petroleum naphtha	64742-94-5	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Heavy aromatic petroleum naphtha	64742-94-5	Did not show carcinogenic effects in animal experiments (similar substances) Not regarded as carcinogenic.
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	Substances which should be regarded as if they are carcinogenic to man

Substances	CAS Number	Reproductive toxicity
Heavy aromatic petroleum naphtha	64742-94-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Heavy aromatic petroleum naphtha	64742-94-5	May cause headache, dizziness, and other central nervous system effects.
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	May cause disorder and damage to the Respiratory system.
Naphthalene	91-20-3	No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
Heavy aromatic petroleum naphtha	64742-94-5	No significant toxicity observed in animal studies at concentration requiring classification.
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal	68910-70-3	No information available

l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides		
Naphthalene	91-20-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Heavy aromatic petroleum naphtha	64742-94-5	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	No information available

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Heavy aromatic petroleum naphtha	64742-94-5	EC50 (72h) 7.8 mg/L (Pseudokirchneriella subcapitata)	LL50 (96 h) =3.6 mg/L (Oncorhynchus mykiss) LC50 (96 h) =357.7 mg/L (Scophthalmus maximus)	No information available	EL50 (48h) 1.1 mg/L (Daphnia magna) (similar substance)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal l-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available	No information available	No information available	No information available
Naphthalene	91-20-3	EC50 (72 h) =0.4 mg/L (Skeletonema costatum)	LC50 (96 h) =1.6 mg/L (Oncorhynchus mykiss) NOAEC (40 d) =0.37 mg/L (Oncorhynchus kisutch)	IC50 (24 h) =29 mg/L (Nitrosomonas sp.)	EC50 (48 h) =2.16 mg/L (Daphnia magna) NOAEC (125 d) =0.59 mg/L (Daphnia pulex)

Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Heavy aromatic petroleum naphtha	64742-94-5	Readily biodegradable (58% @ 28d)
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	Readily biodegradable (100% @ 7d)

Bioaccumulation potential

Substances	CAS Number	Bioaccumulation
Heavy aromatic petroleum naphtha	64742-94-5	LogPow 5.2
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	LogPow 3.3

Mobility in soil

Substances	CAS Number	Mobility
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Imidazolium compounds, 1-benzyl-4,5-dihydro-2-nortal-oil alkyl-1-(2-tall-oil aminoethyl), chlorides	68910-70-3	No information available
Naphthalene	91-20-3	No information available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal methods**

Dispose in accordance with local regulations.

Contaminated Packaging

Follow all applicable national or local regulations.

Other Information

No information available

14. TRANSPORT INFORMATION**UN Number**

UN3265

UN proper shipping name:

Corrosive Liquid, Acidic, Organic, N.O.S.
(Contains Imidazole)

Transport Hazard Class(es):

8

Packing Group:

III

Environmental Hazards:

Marine Pollutant Marine Pollutant
(Contains Heavy aromatic petroleum naphtha, Naphthalene)

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:

30-Oct-2019

Revision Note

Update to Format

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End of Safety Data Sheet