

Safety Data Sheet

PRODUCT CODE: **KHF002**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Clay Stabilizer: KHF002

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.
Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.
+966 56 917 2181

Emergency phone:

2. HAZARDS IDENTIFICATION

Main environmental hazards:

Unknown

Main physical hazards:

Special precautions:

None

Physical hazard:

Dust

Main health hazards:

Causes mild eye irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS #
Potassium Chloride	90-100	7447-4-7

4. FIRST AID MEASURES

Eye contact:

Flush eyes with water for 5 minutes while holding eyelids open.

Skin contact:

Wash with water. Seek medical attention if irritation occurs.

Inhalation:

Remove to fresh air.

Swallowing:

Rinse mouth with water.

Note:

None

5. FIRE-FIGHTING MEASURES

Extinguishing media:

None needed

Further information:

None known

NFPA Rating:

Health 1; Flammability 0; Reactivity 0; Other: None.

Combustion products:

See Section 10.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:

Scoop into containers. Flush residual with plenty of water.

See Section 8 for protective equipment information.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

Special precautions:

Keep material dry.

Packaging requirements:

Bag with moisture barrier.

Ventilation:

Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:

None normally needed.

Eye protection:

Chemical splash goggles.

Hand protection:

Impervious gloves made of rubber.

Skin protection:	Clean, body-covering clothing.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.
Dust particles:	total = 10 mg/m ³ , respirable fraction = 5 mg/m ³ .

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Crystals
Color:	White
Odor:	None
pH value:	6.0-8.0 (2.0 wt.% water solution)
Boiling point:	1420°C
Pour point:	773°C
Flash point:	Not combustible
Flammability (explosion limits in air):	
Lower:	Not applicable
Upper:	Not applicable
Auto-flammability (auto-ignition temperature):	Not applicable
Vapor pressure:	0.13 kPa (20°C)
Relative density (specific gravity):	1.88-2.08
Bulk density (solids):	1000 kg/m ³
Solubility in water:	28% (20°C)
Viscosity:	Not applicable
Relative vapor density (air=1):	Not applicable
% Volatile:	<1

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Unknown
Materials to avoid:	Not known
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	None

11. TOXICOLOGICAL INFORMATION

Eye contact:	Mild irritating
Skin contact:	No effect
Inhalation:	No effect
Ingestion:	No effect
Carcinogenicity:	Not listed by IARC, USA NTP, or USA OSHA.
Mutagenicity:	Not known to cause heritable genetic damage.
Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected:	Blood
Sensitization:	Not known to cause allergic reaction.
Other:	May cause vomiting, dizziness, nausea, diarrhea.

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	None known
Degradability:	Not applicable
Other:	None known

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by incineration (preferred) or chemical deactivation or other acceptable method in accordance with local regulations.
Container:	Send empty bags to sanitary landfill. Render other types of containers unusable by puncturing or crushing and sanitary landfill unless prohibited by local regulations.

14. TRANSPORT INFORMATION

UN Number:	None
IMO Description:	Not regulated
Class:	
Package Group:	
Label:	
EMS:	
MFAG:	
LATA Description:	Not regulated
Class:	
Sub Risk:	
Package Group:	
Label:	
ADR Description:	Not regulated
ADR class/item:	
ADR Danger ID:	
ADR Label:	

15. REGULATORY INFORMATION

Risks:	Not required to be labelled.
Safety advice:	Exercise reasonable care and cleanliness.
Notification/restrictions status:	
EUROPEAN UNION (EU):	All components of this material are on the EINECS inventory, or the components are exempt from inventory reporting.
NORWAY:	Not determined
USA:	All components of this material are on the USA TSCA inventory, or the components are exempt from inventory reporting.

16. OTHER INFORMATION

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KHF002C**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Clay Stabilizer: KHF002C

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.
Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.
+966 56 917 2181

Emergency phone:

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

GHS-US Classification:

Acute Toxicity. Category 3 (Oral): H301

Eye Irritation. Category 2A: H319

GHS-US Labeling:

Hazard Pictograms:



Signal Word:

Danger

Hazard Statements:

H301 - Toxic if swallowed.

H319 - Causes serious eye irritation.

Precautionary Statements:

P264 - Wash exposed skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear eye protection, protective gloves.

P301+P310 - IF SWALLOWED: 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.

P321 - Specific treatment (see reference to supplemental first aid instruction on this label) if immediate administration of antidote is required. P330 - If swallowed, rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P405 - Store locked up.

P501 - Dispose of contents/container to comply with local, state and federal regulation.

Other Hazards:

Water Slick

Unknown acute toxicity (GHS US):

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
(2-Hydroxyethyl) trimethylammonium Chloride	40-65	67-48-1
Water	35-60	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult

Skin contact:	a physician, preferably an ophthalmologist.
Inhalation:	Wash with plenty of water.
Swallowing:	Move person to fresh air; if effects occur, consult a physician.
Note:	If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
	None

5. FIRE-FIGHTING MEASURES

Extinguishing media:	Water fog, CO ₂ , dry chemical.
Further information:	Wear protective firefighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas. Material is an oxidizer.
NFPA Rating:	Health 1 Flammability 1 Reactivity 0 Other None
Combustion products:	See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
	Keep unnecessary and unprotected personnel from entering the area.
Environmental precautions:	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
	Contain with dikes. Put in steel or plastic drum. Soak up residual on inert absorbent (sand).

7. HANDLING AND STORAGE

Special precautions:	No special precautions required.
Packaging requirements:	Steel or high density polyethylene (HDPE) container.
Ventilation:	No special requirements.
Conditions for safe storage:	Avoid temperatures above 40°C.
	Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	None normally needed.
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of rubber.
Skin protection:	Chemical resistant apron.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	No
pH value:	6.5-8.0
Boiling point:	Not determined
Pour point:	Not determined
Flash point:	> 93°C
Method:	Pensky-Martens cc
Flammability (explosion limits in air):	

Lower:	Not determined
Upper:	Not determined
Auto-flammability (auto-ignition temperature):	Not determined
Vapor pressure:	Not determined
Relative density (specific gravity):	1.02-1.07
Viscosity:	3 mPa•s (20°C)
Relative vapor density (air=1):	Not determined
% Volatile:	50

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition.
Materials to avoid:	Strong Acid, Strong Bases, Oxidizers.
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic flammable gases can be released during decomposition. If heated strongly or burned, Carbon monoxide, Carbon dioxide, Hydrogen chloride, Nitrogen oxides are released.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Sever Irritant. Cause pain and redness. Prolonged or repeated contact may cause mild burn.
Skin contact:	Irritant; may cause pain, redness, dermatitis.
Inhalation:	Mildly irritating
Ingestion:	Mildly Irritating; Toxic; can cause illness or death. LD50 (rats) = 3,400 mg/kg.
Carcinogenicity:	Not listed by IARC, USA NTP, or USA OSHA.
Mutagenicity:	Not known to cause heritable genetic damage.
Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected:	Not known
Sensitization:	May cause allergic reaction upon repeated skin Exposure.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	
Degradability:	None known
Other:	Non-toxic to microorganisms on an acute basis (LC50/EC50/EL50LL50>100mg/L in most sensitive species tested).
Marine Toxicities:	Non-toxic

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by incineration (preferred) or chemical deactivation or other acceptable method in accordance with local regulations.
Container:	Sell drum to an approved drum reconditioner or triple rinse crush and ship to sanitary landfill unless prohibited by local

regulations.

14. TRANSPORT INFORMATION

UN Number:

IMO Description:

Not regulated as a dangerous good.

Class:

Package Group:

Label:

EMS:

MFAG:

IATA Description:

IATA-DGR

Class:

Sub Risk:

Package Group:

Label:

ADR Description:

Not regulated as a dangerous good.

ADR class/item:

ADR Danger ID:

15. REGULATORY INFORMATION

OSHA Hazard:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

EUROPEAN UNION (EU):

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NORWAY:

Not regulated as a dangerous good.

USA:

Not regulated as a dangerous good.

16. OTHER INFORMATION

REGULATORY INFORMATION:

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KHF002L**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Clay Stabilizer: KHF002L

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.
Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.
+966 56 917 2181

Emergency phone:

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

GHS-US Classification:

Acute Toxicity. Category 3 (Oral): H301

Eye Irritation. Category 2A: H319

GHS-US Labeling:

Hazard Pictograms:



Signal Word: Danger

Hazard Statements:

H301 - Toxic if swallowed.

H319 - Causes serious eye irritation.

Precautionary Statements:

P264 - Wash exposed skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear eye protection, protective gloves.

P301+P310 - IF SWALLOWED: 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.

P321 - Specific treatment (see reference to supplemental first aid instruction on this label) if immediate administration of antidote is required. P330 - If swallowed, rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P405 - Store locked up.

P501 - Dispose of contents/container to comply with local, state and federal regulation.

Other Hazards: Water Slick

Unknown acute toxicity (GHS US): No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Organic Ammonium Chloride	45-55	
Water	45-55	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 30 minutes while holding eyelids open. Seek medical attention at once.

Skin contact:

Immediately remove contaminated clothes and shoes. Wash

Inhalation:	with soap and water for 15 minutes Seek medical attention. Remove to fresh air. Seek medical attention if irritation persists or you feel unwell.
Swallowing:	If several grams are swallowed, immediate medical is required. If delayed, consider inducing vomiting with ipecac or other means. After vomiting give 2 glasses milk or water.
Note:	None

5. FIRE-FIGHTING MEASURES

Extinguishing media:	Water Fog, Alcohol Foam, CO ₂ , Dry Chemical.
Further information:	Wear protective firefighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas. Material is an oxidizer.
NFPA Rating:	Health 3 Flammability 1 Reactivity 0 Other: None
Combustion products:	See Section 10.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:	Contain with dikes. Put in steel or plastic drum. Soak up residual on inert absorbent (sand).
See Section 8 for protective equipment information.	
See Section 13 for disposal information.	

7. HANDLING AND STORAGE

Special precautions:	No special precautions required.
Packaging requirements:	Steel or high density polyethylene (HDPE) container.
Ventilation:	No special requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	None normally needed.
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of rubber.
Skin protection:	Chemical resistant apron.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	No
pH value:	7.0-8.0
Boiling point:	Not determined
Pour point:	Not determined
Flash point:	> 93°C
Method:	Pensky-Martens cc
Flammability (explosion limits in air):	
Lower:	Not determined
Upper:	Not determined
Auto-flammability (auto-ignition temperature):	Not determined
Vapor pressure:	Not determined
Relative density (specific gravity):	1.08-1.13
Bulk density (solids):	Not applicable

Solubility in water:	Soluble
Viscosity:	6 mPa•s (20°C)
Relative vapor density (air=1):	Not determined
% Volatile:	50

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Unknown
Materials to avoid:	Oxidizers
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	If heated strongly or burned, oxides of carbon and nitrogen, ammonia, chlorine oxides, hydrogen chloride and organic fumes are released.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Sever Irritant. Cause pain and redness. Prolonged or repeated contact may cause mild burn.
Skin contact:	Irritant; may cause pain, redness, dermatitis.
Inhalation:	Mildly irritating.
Ingestion:	Mildly Irritating; Toxic; can cause illness or death. LD50 (rats) = 220mg/kg
Carcinogenicity:	Not listed by IARC, USA NTP, or USA OSHA.
Mutagenicity:	Not known to cause heritable genetic damage.
Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected:	None known
Sensitization:	May cause allergic reaction upon repeated skin exposure.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	
Degradability:	None known
Other:	Toxic to microorganisms
Marine Toxicities:	None known

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by incineration (preferred) or chemical deactivation or other acceptable method in accordance with local regulations.
Container:	Sell drum to an approved drum reconditioner or triple rinse crush and ship to sanitary landfill unless prohibited by local regulations.

14. TRANSPORT INFORMATION

UN Number:	UN 2810
IMO Description:	Toxic liquid, organic n.o.s. (contains tetramethylammonium chloride).
Class:	6.1
Package Group:	III
Label:	Toxic 6

EMS:	6.1-02
MFAG:	
LATA Description:	Toxic liquid, organic n.o.s. (contains tetramethylammonium chloride).
Class:	6.1
Sub Risk:	
Package Group:	III
Label:	Toxic 6
ADR Description:	Toxic liquid, organic n.o.s. (contains tetramethylammonium chloride).
ADR class/item:	5.1, 18c
ADR Danger ID:	60
ADR Label:	Toxic 6

15. REGULATORY INFORMATION

Symbols:



Signal Word:

Warning

Risks:

Toxic if swallowed.

Safety advice:

S45 In case of accident or if you feel unwell. seek medical advice immediately (show the label where possible) with plenty of water and seek medical advice.

Notification/restrictions status:

EUROPEAN UNION (EU):

All components of this material are on the EINECS inventory, or the components are exempt from Inventory reporting.

NORWAY:

Not determined

USA:

All components of this material are on the USA inventory, or the components are exempt from inventory reporting.

16. OTHER INFORMATION

REGULATORY INFORMATION

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KHF017**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Mutual Solvent: KHF017

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.
Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.
+966 56 917 2181

Emergency phone:

2. HAZARDS IDENTIFICATION

Main health hazards:

Causes severe eye irritation. Causes irritation if swallowed.
Harmful if swallowed.

Main environmental hazards:

Not determined

Main physical hazards

Special precautions:

None

Physical hazard:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Butyl Ether	90-100	5131-66-8

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 30 minutes while holding eyelids open. Seek medical attention at once.

Skin contact:

Immediately remove contaminated clothes and shoes. Wash with soap and water for 15 minutes. Seek medical attention.

Inhalation:

Remove to fresh air. Seek medical attention if irritation persists or you feel unwell.

Swallowing:

If several grams are swallowed, immediate medical is required. If delayed, consider inducing vomiting with ipecac or other means. After vomiting give 2 glasses milk or water.

Notes:

None

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Water Fog, Alcohol Foam, CO₂, Dry Chemical.

Further information:

Wear protective firefighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas.

NFPA Rating:

Health 2; Flammability 2; Reactivity 0; Other: None.

Combustion products:

see Section 10.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:

Contain with dikes. Use explosion proof equipment to recover. Remove all sources of ignition. Soak up residual on inert absorbent (sand). Put in steel or plastic drum.

See Section 8 for protective equipment information.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

Special precautions:

Keep away from heat, sparks, and flame. Keep container closed when not in use. Use with adequate ventilation. Do not

Packaging requirements:	cut or weld on container. Uncoated phosphatized steel drum; high density polyethylene (HDPE) can for short term storage only.
Ventilation:	Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	None normally needed.
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves.
Skin protection:	Chemical resistant suit. Chemical resistant boot.
Exposure limit guidelines (mg/m3):	Components having no established limits are not listed. (NE: Not established, ND: Not determined) These numbers may be referred to as OEL, MAC, MAK, MEL, OES, REL, PEL, or TLV, TWA is the 8-hour time weighted average. STEL is the short-term exposure limit. "C" indicates the value is a maximum concentration (ceiling).

2-BUTOXYETHANOL:

	TWA	STEL	ANM
AUSTRALIA	120H	NE	
BELGIUM	121H	NE	
DENMARK	120H	NE	
EU	NE	NE	
FRANCE	120H	NE	
GERMANY	100HY	NE	
HOLLAND	100H	200H	
NORWAY	100H	NE	H
UNITED KINGDOM	120H	NE	

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	Pleasant
pH value:	5.5-6.5
Boiling point:	171.2°C
Pour point:	-70°C
Flash point:	66°C
Method:	Pensky-Martens CC
Flammability (explosion limits in air):	
Lower:	1.1%
Upper:	10.6%
Auto flammability (auto-ignition temperature):	240°C
Vapor pressure:	0.12 kPa (25°C)
Relative density (specific gravity):	0.90-0.95
Bulk Density (solids):	Not applicable
Solubility in water:	Soluble
Viscosity:	6 mPa•s
Relative Vapor Density (air=1):	4.10
% Volatile:	100

10. STABILITY AND REACTIVITY

Stability:	Stable
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Conditions to avoid:	None determined
Materials to avoid:	Oxidizers
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	If heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritant. May cause pain, redness, discomfort.
Skin contact:	Irritant; may cause pain, redness, dermatitis. LD50(rabbits) = 220 mg/kg.
Inhalation:	Irritant; may cause pain and coughing. Harmful if inhaled; may cause illness.
Ingestion:	Irritant; may cause pain or discomfort to mouth, throat and stomach. Harmful if swallowed large amounts may cause illness. LD50(rabbits) = 1500 mg/kg.
Carcinogenicity:	Not listed by IARC, USA NTP, or USA OSHA.
Mutagenicity:	Not known to cause heritable genetic damage.
Teratogenicity:	Not known to cause birth defects.
Target organs what might be affected:	None known
Sensitization:	May cause allergic reaction upon repeated skin exposure.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	None known
Degradability:	Biodegradable BOD = 1.8 p/p; COD = 2.2 p/p
Other:	None known

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by incineration (preferred) or chemical deactivation or other acceptable method in accordance with local regulations.
Container:	Sell drum to an approved drum reconditioner or triple rinse crush and ship to sanitary landfill unless prohibited by local regulations.

14. TRANSPORT INFORMATION

UN Number:	None
IMO Description:	Not regulated
Class:	
Package Group:	
Label:	
EMS:	
MFAG:	
IATA Description:	Not regulated
Class:	
Sub Risk:	
Package Group:	
Label:	
ADR Description:	Not regulated

ADR class/item:

15. REGULATORY INFORMATION

Symbols:



Risks:

Harmful

R20/21/22 Harmful by inhalation, in contact with skin and of swallowed.

R37 Irritating to respiratory system.

S24/25 Avoid contact with skin and eyes.

Safety advice:

Notification/restrictions status:

EUROPEAN UNION (EU):

All components of this material are on the EINECS inventory, or the components are exempt from inventory reporting.

NORWAY:

Not determined

USA:

All components of this material are on the USA TSCA inventory, or the components are exempt from inventory reporting.

16. OTHER INFORMATION

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KHF041**

Effective Date: December-2023

Version: 2.0

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

Identification of the substance or preparation:

Surfactant Gelling Agent: KHF041

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.
Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.
+966 56 917 2181

Emergency phone:

2. HAZARDS IDENTIFICATION

Main environmental hazards:

Acute aquatic toxicity. Chronic aquatic toxicity.

Main physical hazards:

Flammable Liquids

Main health hazards:

Skin corrosion/irritation. Serious eye damage/eye irritation.
Specific target organ toxicity - Single exposure.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Ammonium Quaternary Compound	35-45	-
Propanol	20-25	67-63-0
Water	30-35	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Promptly wash eyes with lots of water while lifting eye lids.
Remove contact lenses, if worn. Continue to rinse for at least
15 minutes. Get medical attention if any discomfort continues.

Skin contact:

Wash off immediately with soap and plenty of water. Remove
contaminated clothing and shoes. Seek medical attention if
irritation occurs.

Inhalation:

If inhaled, remove from area to fresh air. Get medical attention
if respiratory irritation develops or if breathing becomes
difficult.

Ingestion:

Rinse mouth. Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person. Get
medical attention if symptoms occur.

Notes to physician:

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Extinguish with carbon dioxide, dry chemical, foam or water
spray.Extinguishing media which must not be used
for safety reasons:

High volume water jet

Unusual fire and explosion hazards:

FLAMMABLE. Vapors are heavier than air and may spread
along floors. Vapors may travel to source of ignition and flash
back. Heating of containers may cause pressure rise, with risk
of bursting.

Hazardous combustion products:

Thermal decomposition can lead to release of irritating and
toxic gases and vapors, Carbon oxides (COx), Nitrogen
oxides (NOx).

Special protective equipment for fire-fighters:

As in any fire, wear self-contained breathing apparatus and
full protective gear.

Special Fire-Fighting Procedures:

Containers close to fire should be removed immediately or
cooled with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Remove all sources of ignition. Keep away from heat, sparks, and flame. Avoid contact with skin, eyes and inhalation of vapors. Use personal protective equipment. See also section 8. Wash thoroughly after handling.
Environmental exposure controls:	Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.
Methods for containment:	Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up:	Take precautionary measures against static discharges. Use non-sparking tools and equipment. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13). Ground and bond containers when transferring material. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Avoid spills and splashing during use. Persons susceptible to allergic reactions should not handle this product. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures:	Use good work and personal hygiene practices to avoid exposure. Wash hands and face before breaks and immediately after handling the product. Remove contaminated clothing. Do not eat, drink or smoke when using this product.
Technical measures/precautions:	Ensure adequate ventilation. Keep airborne concentrations below exposure limits. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Ensure all equipment is electrically grounded before beginning transfer operations.
Storage precautions:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Heat. Store away from incompatibles. Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.
Packaging materials:	Use specially constructed containers only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls:	A risk assessment is recommended to be performed by a qualified and trained personnel to analyze the worksite and recommends the appropriate controls such as engineering controls, work practice controls, and administrative controls as primary means of reducing employee exposure. When there is a remaining hazard after applying the primary controls, Personal Protective Equipment (PPE) must be used.
Eye protection:	Tightly fitting safety goggles.
Hand protection:	Use protective gloves made of: polyvinyl alcohol or nitrile-butyl rubber gloves. Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory Protection:	All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent. If exposed to airborne mist/aerosol of this product, use an organic vapor

Skin protection:

cartridge with a P-95 pre-filter attached. In work environments containing oil mist/aerosol, use an organic vapor cartridge with a P-95 pre-filter attached. If exposed to vapors from this product, use a NIOSH/MSHA-approved respirator with an organic vapor cartridge.

Wear appropriate personal protective clothing to prevent skin contact, Eye wash and emergency shower must be available at the workplace.

Hygiene Measures:

Wash hands before breaks and immediately after handling the product, Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Amber-yellow
Odor:	Slight
pH value:	7.0-8.0 (1.0 vol.% aqueous alcohol solution)
Boiling point:	Not available
Pour point:	No information available
Flash point:	20°C closed up (data based on similar products.)
Flammability (explosion limits in air):	
Lower:	Not applicable
Upper:	Not applicable
Auto-flammability (auto-ignition temperature):	
Vapor pressure:	No information available
Relative density (specific gravity):	1.00-1.05
Bulk Density (solids):	No information available
Solubility in water:	Soluble in water
VOC content (%):	< 25

10. STABILITY AND REACTIVITY

Reactivity:	No specific reactivity hazards associated with this product.
Chemical stability:	Stable under normal temperature conditions and recommended use.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Avoid heat, flames and other sources of ignition. Keep away from direct sunlight.
Incompatible materials:	Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Causes serious eye irritation. May cause pain, redness, discomfort.
Skin contact:	Causes skin irritation.
Inhalation:	Inhalation of vapors in high concentration may cause irritation of respiratory system. May cause drowsiness or dizziness.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Carcinogenicity:	This product does not contain any known or suspected carcinogens.
Mutagenicity:	This product does not contain any known or suspected mutagens.
Reproductive toxicity:	This product does not contain any known or suspected

Developmental toxicity:	reproductive hazards. Not known to cause birth defects or have a deleterious effect on a developing fetus.
Target organs which may be affected:	Central nervous system.
Sensitization:	Not classified
Aspiration hazard:	Not classified

12. ECOLOGICAL INFORMATION

Persistence and degradability:	No information available
Bioaccumulative potential:	No information available
Mobility:	The product is water soluble and may spread in water systems.
Results of PBT and vPvB assessment:	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).
Other adverse effects:	None known

13. DISPOSAL CONSIDERATIONS

Disposal Method:	Disposal should be made in accordance with federal, state and local regulations.
Contaminated packaging:	Empty containers should be taken for local recycling, recovery or waste disposal. Empty containers may contain flammable or explosive vapors. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

UN Number:	
UN No. (DOT):	UN1993
UN No. (MT/ANTT):	UN1993
UN No. (TDG):	UN1993
UN/ID No. (ADR/RID/ADN/ADG) UN No. (IMDG/ANTAQ):	UN1993
UN No. (ICAO/ANAC):	UN1993
UN No. (DPC):	UN1993
Hazard class(es):	
DOT Hazard class:	3
ANTT Hazard class:	3
TDG Hazard class:	3
ADR/RID/ADN/ADG Hazard class:	3
IMDG/ANTAQ Hazard class:	3
ICAO/ANAC Hazard class/division:	3
DPC Hazard class:	3
Packing group:	
DOT Packing group:	II
ANTT Packing group:	II
TDG Packing group:	II
ADR/RID/ADN/ADG Packing group:	II
IMDG/ANTAQ Packing group:	II
ICAO/ANAC Packing group DPC:	II
Packing group:	II
Special precautions:	Not applicable

15. REGULATORY INFORMATION

International inventories:

USA (TSCA):	Complies
Canada (DSL):	Complies
Philippines (PICCS):	Does not comply
Japan (ENCS):	Does not comply
China (IECSC):	Does not comply
Australia (AICS):	Complies
Korean (KECL):	Does not comply
New Zealand (NZIoC):	Does not comply

Europe – REACH: All products supplied from the European Economic Area (EEA) are compliant with the REACH Regulation EC 1907/2006.

IMPORTS, Canada:

No import volume restrictions.

U.S. Federal and State Regulations:

SARA 311/312 Hazard Categories:

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

California Proposition 65:

This product does not contain chemical[s] which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Classification:

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

16. OTHER INFORMATION

DISCLAIMER:

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

*** END OF SDS***