

Safety Data Sheet

PRODUCT CODE: **KMA001S**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Flowback Surfactant: KMA001S

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:

Skin irritation, category 3: H315

Eye irritation, category 2B: H320

Specific target organ toxicity, single:
exposure; Respiratory tract irritation: H335Specific target organ toxicity, single exposure:
Narcotic effects, Category 3: H336

GHS-US labeling:

Hazard pictograms:



Signal word:

Warning

Hazard statements:

H315 – Causes skin irritation.

H3320 – Causes eye irritation.

H335 – May cause respiratory irritation.

H336 – May cause drowsiness or dizziness.

Precautionary statements:

P261 – Avoid breathing dust.

P264 – Wash hands, forearms, and exposed areas thoroughly after handling.

P271 – Use only outdoors or in a well-ventilated area.

P280 – Wear eye protection, protective clothing, and protective gloves.

P302+P352 – If on skin, wash with plenty of soap and water.

P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 – Call a POISON CENTER or doctor/physician if you feel unwell.

P321 – Specific treatment (see reference to supplemental first aid instruction on this label).

P332+P313 – If skin irritation occurs: Get medical advice/attention.

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

P403+P233 – Store in a well-ventilated place. Keep container

Other hazards:	tightly closed.
Unknown acute toxicity (GHS US):	P405 – Store locked up. P501- Dispose of contents/container according to local, regional, national, and international regulations. No additional information available. No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Polymeric ester	50	-
Organic solvent	50	64742-94-5

4. FIRST AID MEASURES

Eye contact:	Flush eyes with water for 15 minutes. Get medical attention if irritation occurs.
Skin contact:	Wash with water and soap.
Ingestion:	Remove to fresh air.
Inhalation:	Do not induce vomiting. Give 2 glasses of milk or rinse mouth with water. Seek medical attention if irritation occurs.
Notes:	Notes

5. FIRE-FIGHTING MEASURES

Extinguishing media:	Water fog, alcohol foam, CO ₂ , dry chemical.
Further information:	Vapor may travel along the ground. Avoid breathing.
NFPA rating:	Health 1; 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 etc.
Waste disposal:	See Section 13 for disposal information.
See section 8 for protective equipment information.	
See section 13 for disposal information.	

7. HANDLING AND STORAGE

Special precautions:	Away from heat, sparks or flames. Keep in well-ventilated areas to avoid direct sunlight.
Packaging requirements:	Steel or high-density polyethylene (HDPE) container.
Ventilation:	Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Normally not required.
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of rubber.
Skin protection:	Clean, body-covering clothing. Cotton gloves.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Light brownish
Odor:	Faint

pH value:	Not applicable
Boiling point:	80°C
Pour point:	-10°C
Flash point:	Not determined
Method:	Pensky-Martens CC
Flammability (explosion limits in air):	
Lower:	Not determined
Upper:	Not determined
Auto flammability (auto-ignition temp.):	Not determined
Vapor pressure:	Not determined
Relative density (specific gravity):	1.00-1.05
Bulk density (solids):	Not applicable
Solubility in water:	Soluble

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:	When heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

11. TOXICOLOGICAL INFORMATION

Eye contact:	May irritate, cause redness, pain or discomfort.
Skin contact:	Irritating, cause redness, pain and dermatitis.
Inhalation:	Mildly irritating
Ingestion:	Harmful if swallow large amount.
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:	Not known to cause allergic reaction.
Other:	May cause dizziness, nausea or headache.

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	Not available
Degradability:	Partially biodegradable
Other:	None known

13. DISPOSAL CONSIDERATIONS

Products:	Dispose of by incineration (preferred) or other, acceptable method in accordance with local regulations.
Container:	Sell drum to an approved drum re-conditioner or 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:	
Class:	Not regulated
Sub risk:	
Package group:	
Label:	
ADR description:	
ADR class/item:	Not regulated
ADR danger id:	

15. REGULATORY INFORMATION

Symbols:

Risks:

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

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: **KMA009**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

H₂S Scavenger: KMA009

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:

Flammable liquid

Main health hazards

Causes eye irritation. Harmful if absorbed through the skin. May cause allergic reaction upon repeated skin exposure. Irritating to mucous membranes. Harmful if swallowed. May cause Central Nervous System (CNS) depression.

Precautions:

Keep away from open flames, hot surfaces and sources of ignition. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Do not breathe vapors or spray mist. Avoid contact with the skin. and the eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Aromatic Aldehyde	70-80	-
Propan-2-ol	15-25	67-63-0
Ether	10-20	-

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 30 minutes while holding eyelids open. Consult a physician.

Skin contact:

Take off contaminated clothing and shoes immediately. Rinse immediately with plenty of water for at least 15 minutes. Seek medical attention if irritation occurs.

Inhalation:

Move to fresh air in case of accidental inhalation of vapors. If breathing has stopped or heart has stopped, trained personnel should immediately administer artificial respiration or CPR, as required. Call a physician or Poison Control Centre immediately.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Dry chemical, CO₂, water spray or "alcohol" foam.

Further information:

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

NFPA Rating:

Health 2; Flammability 3; Reactivity 0; Other: None.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:

Contain with dikes. Use explosion proof equipment to residual on inert absorbent (sand). recover. Remove all sources of ignition. Put in plastic drum approved for flammables.

See Section 8 for protective equipment information.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

Precautions:	Keep away from open flames, hot surfaces and sources of ignition. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Do not breathe vapors or spray mist. Avoid contact with the skin and the eyes.
Packaging requirements:	Steel or high-density polyethylene (HDPE) container approved for flammables.
Ventilation:	cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Use respirator with organic vapor protection (A, brown). Use SCBA (self-contained breathing apparatus) in confined areas and for emergencies.
Eye protection:	Tightly fitting safety goggles.
Hand protection:	Impervious gloves. PVC. Nitrile.
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 to light yellow
Odor:	Alcohols / Aldehydes
pH value:	Not Applicable
Boiling point:	85°C
Pour point:	18°C
Flash point:	
Method:	Seta flash 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):	1.05-1.15
Bulk density (solids):	Not applicable
Solubility in water:	276 g/L (@ 20°C)
Viscosity:	5 mPa·s (25°C)
% Volatile:	> 80

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Keep away from heat and sources of ignition.
Hazardous polymerization:	None
Hazardous decomposition products:	When heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritant. Causes pain and redness. Prolonged or repeated contact may cause mild burn.
Skin contact:	Irritant; may cause pain, redness, dermatitis. Harmful if absorbed through the skin; may cause illness. Prolonged skin contact may defat the skin and produce dermatitis.
Inhalation:	Harmful if inhaled; may cause illness. May cause Central Nervous System (CNS) depression. Can cause headache, narcosis.
Ingestion:	Irritant; may cause pain or discomfort to mouth, throat and stomach. May cause Central Nervous System (CNS) depression.
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:	Not known to cause allergic reaction.
Other:	No information

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

Product:	Treat as hazardous waste. Dispose of in accordance with local regulations. Ship via permitted waste hauler to permitted hazardous waste disposal facility for incineration (preferred) or disposal well injection of all liquids and landfilling of solids.
Container:	Dispose of in accordance with local regulations. If reusable containers are used, send them back to the product supplier, after the required rinsing.

14. TRANSPORT INFORMATION

UN Number:	UN 2920
IMO Description:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Class:	8
Package Group:	II
Label:	Corrosive 8, Flammable Liquid 3
EMS:	F-E, S-C
MFAG:	
IATA Description:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Class:	8
Sub Risk:	3
Package Group:	II
Label:	Corrosive 8, Flammable Liquid 3
TDG Description:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
TDG class/item:	8

15. REGULATORY INFORMATION

Safety advice:	Exercise reasonable care and cleanliness.
Notification/restrictions status: EUROPEAN UNION (EU):	All components of this material are on the EINECS inventory,

NORWAY:

USA:

or the components are exempt from inventory reporting.

Not determined.

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

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***

Safety Data Sheet

PRODUCT CODE: **KMA009B**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

H₂S Scavenger Aid: KMA009B

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.

Emergency phone:

Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

GHS-US Classification:

Skin Irritation Category 2

Serious eye damage Category 1

Specific target organ toxicity – repeated
exposure – category 2 – oral

GHS-US Labeling:

Hazard Pictograms:



Signal word:

Danger

Hazard Statements:

H318 - Causes skin Irritation.

Causes skin Irritation Causes serious eye damage.

May cause damage to organs (kidney, liver, blood) through
prolonged or repeated exposure if swallowed.

Precautionary Statements:

Prevention:

P280 - Wear eye protection/face protection.

Response:

P305 + P351 + P338 - If in eyes, rinse cautiously with water for
several minutes. Remove contact lenses if present. Continue
rinsing.

P310 - Immediately call a POISON CENTER or doctor.

Other Hazards:

If applicable information is provided in this section on other
hazards which do not result in classification, but which may
contribute to the overall hazards of the substance or mixture.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
1, 1', 1''-Nitritoltri-2-PROPANOL	85-90	-
Water	10-15	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 15minutes while holding
eyelids open. Seek medical attention at once.

Skin contact:

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

Seek medical attention.

Inhalation:

Remove to fresh air. Seek medical attention.

Ingestion:

Rinse your mouth with water. Seek medical attention.

Most important symptoms and effects, both

Overexposure may cause abdominal cramps, shortness of

acute and delayed:	breath, and coughing.
Indication of any immediate medical attention and special treatment needed:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIRE-FIGHTING MEASURES

Flammable properties:	
Flash point:	Approximately 196.1°C
Auto ignition temperature:	No data available
Flammable limits:	
LFL:	No information available
UFL:	No information available
Extinguishing media:	Water Fog, Foam, and Dry powder.
Hazards during firefighting:	Nitrogen oxides, Carbon oxides.
Advice for fire-fighters:	Wear self-contained breathing apparatus and chemical protective clothing.
Further Information:	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards:	None
Personal precautions	Use personal protective clothing. Information regarding personal protective measures see Section 8. Avoid inhalation. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Methods for cleaning up:	
For large amounts:	Pump off product.
For residues	Pick up with suitable absorbent material (sand, sawdust, general-purpose binder, kieselguhr). Dispose absorbed material in accordance with regulations.
Environmental precautions:	Prevent further leakage or spillage. Keep out of Water ways.

7. HANDLING AND STORAGE

Special precautions:	Ensure thorough ventilation. prevent electrostatic charge, sources of ignition should be kept well clear, fire extinguishers should be kept handy.
Packaging requirements:	Segregate from acids Storage temperature 20°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Suitable respiratory protection for higher concentrations or long-term effect: Gas filter for gases/vapors of organic compounds (boiling point > 65°C).
Eye protection:	Tightly fitting safety goggles.
Hand protection:	Chemical resistant protective gloves (EN 374), Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374);, e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other, Manufacturer's directions for use should be observed because of great diversity of types., Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g., temperature) it must be considered. That the practical usage of a chemical-protective glove in practice may be much shorter

than the permeation time determined through testing.

Skin protection:

Body protection must be chosen depending on activity and possible exposure, e.g., apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Exposure limit guidelines (mg/m³):

No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Colorless to yellowish
Odor:	Amine
Vapor Pressure:	22 mbar (20°C)
pH value:	8.5-9.5 (1.0 vol.% water solution)
Relative density (specific gravity)	1.06-1.11
Ignition temperature:	Not self-igniting
Explosion limits:	
Lower:	Not relevant
Upper:	Not relevant
Boiling point:	121°C
Melting point:	< -10°C
Flash point:	174°C (based on main components)
Boiling point:	100 – 300°C
Autoignition:	1285°C (based on individual components)
Solubility in water:	830 g/L at 20°C

10. STABILITY AND REACTIVITY

Conditions to avoid:	Extreme temperature
Materials to avoid:	Acid chlorides, acid anhydrides, acid forming substances, oxidizing agents, nitro sating agents.
Corrosivity:	Not available
Special remarks on reactivity:	Not available
Hazardous decomposition:	Carbon oxides, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Genetic toxicity:	
Assessment of mutagenicity:	Based on available Data, the classification criteria are not met.
Assessment of mutagenicity:	The substance was not mutagenic in bacteria. No mutagenic effect was found in various tests with mammalian cell culture and mammals.
Carcinogenicity Information:	
Assessment of carcinogenicity:	In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.
Reproductive toxicity Assessment of reproduction toxicity:	Based on available Data, the classification criteria are not met.
Assessment of reproduction toxicity:	The results of animal studies gave no indication of a fertility impairing effect.
Teratogenicity Assessment of teratogenicity:	Based on available Data, the classification criteria are not met.
Assessment of teratogenicity:	No indications of a developmental toxic / teratogenic effect were seen in animal studies. Mortality observed in rabbits following high oral exposure.
Other Information development of pulmonary	The product has not been tested. The statements on

edema.

toxicology have been derived from the properties of the individual components. Symptoms of Exposure Overexposure may cause abdominal cramps, Shortness of breath, cough.

12. ECOLOGICAL INFORMATION

Aquatic toxicity:	Not harmful
Biodegradability:	Not available
Special Remarks on the Products of Biodegradation:	Not available

13. DISPOSAL CONSIDERATIONS

Waste product:	Ship via permitted waste hauler to permitted hazardous waste disposal facility for incineration.
Contaminated packaging:	Contaminated packaging should be emptied as far as possible, then it can be passed on for recycling after being thoroughly cleaned.

14. TRANSPORT INFORMATION

The preparation is not classified as dangerous goods:	
Proper shipping name:	Not regulated
Hazard class:	Not regulated
Packing group:	None
Identification number:	Not regulated

15. REGULATORY INFORMATION

European Labeling in Accordance with EC Hazard symbols:	
Risk phrases:	None
Safety phrases:	None
US Regulations:	
TSCA:	All ingredients are on the TSCA inventory.

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: **KMA022B**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

SGA Iron Control Agent: KMA022B

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2nd Industrial City, 6th Street, 101 Intersection,

Postal code 34334, Kingdom of Saudi Arabia.

Emergency phone:

+Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Main environmental hazards:

Unknow

Main physical hazards:

Special precautions:

Specific target organ toxicity.

Physical hazard:

Reducer

Main health hazards:

Possible cancer hazard. Cause eye irritation. Toxic if swallowed. Causes irritation if swallowed. Toxic if inhaled. May cause genetic changes. May cause tumors. Toxic if absorbed through the skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Amine Chloride	40-60	-
Water	40-60	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 15 minutes, while holding eyelids open. Seek medical attention.

Skin contact:

Immediately remove contaminated clothes and shoes. Wash with soap and water for 30 minutes. Seek medical attention at once.

Inhalation:

Remove to fresh air. Seek medical attention at once. If breathing has stopped, begin artificial respiration.

Swallowing:

Immediate medical attention required. If delayed, induce vomiting with ipecac or by giving water and sticking finger down throat. After vomiting, give 2 glasses of milk or water.

Note:

None

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Deluge with water. Other methods do not work.

Further information:

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

NFPA Rating:

Health 2; 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 etc. Soak up residue on inert absorber (sand).

See Section 8 for protective equipment information.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

Special precautions:	Keep in well-ventilated areas to avoid direct sunlight.
Packaging requirements:	Steel or high-density polyethylene (HDPE) container.
Ventilation:	Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Use a respirator with ammonia protection (K, green).
Eye protection:	Chemical splash goggles and face shield.
Hand protection:	Butyl impervious gloves made of PVC.
Skin protection:	Chemical resistant suit. Chemical resistant boots.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	Pungent
pH value:	<1.5
Boiling point:	100°C
Pour point:	-10°C
Method:	ASTM D56
Flammability (explosion limits in air):	
Lower:	Not determined
Upper:	Not determined
Auto-flammability (auto-ignition temperature):	>200°C
Vapor pressure:	Not determined
Relative density (specific gravity):	1.10-1.15
Bulk Density (solids):	Not applicable
Solubility in water:	Soluble
Viscosity:	Not determined.
Relative vapor density (air=1):	>1
Volatile%:	67

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Unknown
Materials to avoid:	Bases, Oxidizers
Hazardous polymerization:	Will not occur
Stable	Not applicable
Not known	None
Acids and oxidizers	Ammonia, oxides of nitrogen, Hydrogen chloride, oxides of chloride.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritant. May cause redness, pain or discomfort.
Skin contact:	Toxic; may cause illness or death. Irritant. May cause pain, redness, dermatitis.
Inhalation:	Irritant. May cause pain and coughing. Toxic; can cause illness or death.
Ingestion:	Toxic; can cause illness or death. LD50 (rats) = 128 mg/kg.

Carcinogenicity:	Irritant. May cause pain or discomfort to mouth, throat and stomach. Hydrazine salts are listed in EC Annex 1 as a carcinogen category 2 and may cause cancer.
Mutagenicity:	May cause heritable genetic damage in humans.
Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected	Liver
Sensitization:	May cause allergic reaction upon repeated skin exposure.
Other:	May cause tumors.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by incineration (preferred) or other acceptable method in accordance with local regulations.
Container:	Sell the drum to an approved drum re-conditioner or crusher, and ship to sanitary landfill unless prohibited by local regulations.

14. TRANSPORT INFORMATION

UN Number:	UN2810
IMO Description:	Toxic, liquid, organic, n.o.s. (contains hydrazinium chloride)
Class:	6.1
Package Group:	III
Label:	Toxic 6
EMS:	6.1-02
MFAG:	
IATA Description:	Toxic liquid, organic, n.o.s. (contains hydrazinium chloride)
Class:	6.1
Sub Risk:	none
Package Group:	III
Label:	
ADR Description:	Toxic, liquid, organic, n.o.s. (contains hydrazinium chloride)
ADR class/item:	6.1, 25c
ADR Danger ID:	60
TRM Card:	61G61bc
ADR Label:	Toxic

15. REGULATORY INFORMATION

Symbols:	
Risk:	R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed. R36/38 Irritating to eyes and skin. R43 May cause sensitization by skin contact. R45 - May cause cancer.
Safety advice:	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident feel unwell, seek

medical advice immediately (show the label where possible).
S53 - Avoid exposure - obtain special instructions before use.

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: **KMA024**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

SGA Crosslinker: KMA024

Company/undertaking identification:

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

Emergency phone:

Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Main environmental hazards:

None known

Main physical hazards:

Special precautions:

None

Physical hazard:

Corrosive to metals

Main health hazards:

Cause severe eye and skin burns. Causes burns to mouth, throat, and stomach. Severe skin burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Iron Chloride	30-50	-
Water	50-70	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with plenty of water for 30 minutes while holding eyelids open. Seek medical attention immediately.

Skin contact:

Remove contaminated clothes and shoes. Wash thoroughly with soap and water for 30 minutes. Seek medical attention at once.

Inhalation:

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

Swallowing:

Do not induce vomiting. If several grams are swallowed, give large quantity of milk of magnesia or water. Seek medical attention at once.

Notes:

None

5. FIRE-FIGHTING MEASURES

Extinguishing media:

None needed

Further information:

Wear SCBA and special resistant suit.

NFPA Rating:

Health 3; Flammability 0; Reactivity 0; Other: None.

Combustion products:

see Section 10.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:

Contain with dikes. Neutralize with soda ash, lime or caustic to pH greater than 7.5. Put in containers for disposal as hazardous waste.

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:	Do not use metal containers.
Ventilation:	Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Use respirator with organic vapor/acid gas protection (E, yellow).
Eye protection:	Chemical splash goggles. Face shields.
Hand protection:	Impervious gloves made of butyl PVC.
Skin protection:	Chemical resistant clothing and boots

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).

IRON TRICHLORIDE:

	TWA	STEL	ANM
AUSTRALIA	NE	NE	
BELGIUM	NE	NE	
DENMARK	NE	NE	
EU	NE	NE	
FRANCE	NE	NE	
GERMANY	NE	NE	
HOLLAND	1	NE	
NORWAY	NE	NE	
UNITED KINGDOM	NE	NE	

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Red brown
Odor:	Pungent
pH value:	<1.5
Boiling point:	Decomposes
Pour point:	-2°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:	Not determined
Relative density (specific gravity):	1.30-1.40
Bulk density (solids):	Not applicable
Solubility in water:	Miscible
Viscosity:	Not determined
Relative vapor density (air=1):	Not determined
% Volatile:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Unknown
Materials to avoid:	Metals, Bases
Hazardous polymerization:	Will not occur
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	Chlorine, chlorine oxides, hydrogen chloride

11. TOXICOLOGICAL INFORMATION

Eye contact:	Corrosive. Rapidly causes pain burns and injury.
Skin contact:	Corrosive; rapidly causes pain, redness, swelling and damage to tissue.
Inhalation:	No effect expected.
Ingestion:	Corrosive; causes pain and severe burns in mouth, throat and stomach.
Carcinogenicity:	Not determined
Mutagenicity:	Not known to cause heritable genetic damage.
Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected:	Kidney, Liver
Sensitization:	Not known to cause allergic reaction.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	None known
Degradability:	Not applicable
Other:	None known
Bioaccumulation and biodegradation of the components:	

Substance	Log Pow	Biodegradation
Iron Trichloride	PARCOM Dec 94/1	

13. DISPOSAL CONSIDERATIONS

Product:	Dispose of by sanitary land-filling or other acceptable method in accordance with local regulations.
Container:	Send empty bags to sanitary landfill. Render other types of containers un-useable by puncturing or crushing and sanitary landfill unless prohibited by local regulations.

14. TRANSPORT INFORMATION

UN Number:	2582
IMO Description:	Ferric chloride solution
Class:	8
Label:	Corrosive 8
Package Group:	III
EMS:	8-08
MFAG:	700
IATA Description:	Ferric chloride solution
Class:	8
Sub Risk:	
Package Group:	III

Label:	Corrosive 8
ADR Description:	Ferric chloride solution
ADR class/item:	8, 5C
ADR Danger ID:	80
TREM Card	80G19
ADR Label:	Corrosive 8

15. REGULATORY INFORMATION

Symbols:



Corrosive

Risks:

R22 - Harmful if swallowed.

R34 - Causes burns.

Safety advice:

S26 - In case of contact with eyes, rinse with plenty of water and seek medical attention at once.

S45 - In case of accident, or if you feel unwell seek medical attention immediately.

Label Notes:

Corrosive classification is based on the product pH.

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

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 shall we 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: **KMA027G**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Acid Gelling Agent: KMA027G

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.

Emergency phone:

Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Main environmental hazards:

Very toxic to aquatic organisms.

Main physical hazards:

Special precautions:

None

Physical hazard:

Slick

Main health hazards:

Possible cancer hazard. Cause eyes irritation. Cause skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Amine Polymer	25-35	25085-02-3
Hydrocarbon Solvent	10-30	Proprietary
Solvent	20-35	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 15 minutes, while holding eyelids open. Seek medical attention.

Skin contact:

Remove contaminated clothes and shoes. Wash thoroughly with soap and water. Seek medical attention if irritation occurs.

Inhalation:

Remove to fresh air.

Swallowing:

Rinse your mouth with water. Seek medical attention if irritation occurs.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Water Fog, Alcohol Foam, CO₂, Dry Chemical.

Further information:

Wear protective firefighting clothing and avoid breathing vapor. Use self-contained breathing apparatus in closed areas. corrosive when wet.

NFPA Rating:

Health 2; 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 absorber(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:	Uncoated phosphatized steel drum or high-density polyethylene (HDPE) can.
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:	Clean, body-covering clothing.
Exposure limit guidelines (mg/m ³):	No components have established exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	White
Odor:	None
pH value:	6.0-7.0 (1.0 vol.% water solution)
Boiling point:	93.4°C
Pour point:	Not determined
Flash point:	> 100°C
Method:	Tag closed cup
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):	1.05-1.15
Bulk Density (solids):	Not applicable
Solubility in water:	Soluble 20°C
Viscosity:	315 mPa·s (20°C)
Relative vapor density (air=1):	Not applicable
% Volatile:	53

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not determined
Materials to avoid:	Oxidizers
Hazardous polymerization:	Will not occur
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	When heated strongly or burned, carbon and nitrogen oxides, ammonia 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.
Inhalation:	No effect expected
Ingestion:	No effect expected. LD50 (rats) > 2000 mg/kg.
Carcinogenicity:	A component of this product is listed in EC Annex I as a carcinogen category 2.
Mutagenicity:	Not known to cause heritable genetic damage.

Teratogenicity:	Not known to cause birth defects.
Target organs which may be affected:	None known
Sensitization:	Not known to cause allergic reaction.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	Very toxic to aquatic organisms.
Degradability:	Not biodegradable
Other:	None known

13. DISPOSAL CONSIDERATIONS

Product:	Solids may be sanitary landfilled, and liquids may be injected into disposal wells or disposed of by other acceptable methods 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:	
ADR Danger ID:	
TREM Card:	
ADR Label:	

15. REGULATORY INFORMATION

Symbols	Toxic
Risks:	R36/37/38 - Irritating the eyes, respiratory system and skin. R45 - May cause cancer.
Safety advice:	S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 - After contact with skin, wash immediately with plenty of soap and water. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53 - Avoid exposure - obtain special instructions before use.
Notification/restrictions status:	
EUROPEAN UNION (EU):	All components of this material are in 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

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: **KMA030**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Inhibitor Aid: KMA030

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.

Emergency phone:

Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Main health hazards:

Main cause of the skin, mucous membrane irritation, and can cause conjunctivitis, eyelid edema, rhinitis, bronchitis after contact. Severe cases can cause acute chemical pneumonia.

Main environmental hazards:

Water pollution

Main physical hazards:

Special precautions:

Corrosion resistance

Physical hazard:

This product is flammable, corrosive and excitant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS #
Organic Acid	85-100	-

4. FIRST AID MEASURES

Eye contact:

Flush eyes with water for 15 minutes. Get medical attention.

Skin contact:

Flush with water for 15 minutes and remove the contaminated clothing. Seek medical attention.

Inhalation:

Remove to fresh air.

Swallowing:

If several grams are swallowed, give 2 glasses of milk (preferred) or water and seek medical attention at once.

Notes:

None

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Dry powder, CO₂.

Further Information:

Combustible materials. Wear a self-contained gas mask, MSHA, protective gloves.

NFPA Rating:

Health 2 Flammability 3 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:

Put in a cool, ventilated warehouse. Keep away from fire and heat source. Temperature can reach 30°C, and relative humidity is not more than 85%.

Packaging requirements:

Anticorrosive sealing material.

Ventilation:

Provide good ventilation conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Wear self-absorption filter gas mask.
Eye protection:	With protective glasses.
Hand protection:	Wear rubber gloves.
Exposure Limit Guidelines (mg/m ³):	No components have established exposure limits.
Dust particles:	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Colorless
Odor:	Irritation
pH value:	2.0-3.0 (1.0 vol.% water solution)
Boiling point:	100.8°C
Pour point:	168-170°C
Flash point:	68.9°C
Method:	
Flammability (explosion limits in air):	
Lower:	18.0%(v/v)
Upper:	57.0%(v/v)
Auto flammability (auto-ignition temperature):	410°C
Vapor pressure:	5.33(20°C)
Relative density (specific gravity):	1.20-1.25
Not applicable:	Not applicable
Water solubility:	Soluble

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not known
Materials to avoid:	Strong oxidant, Alkali, Active metal powder.
Hazardous Polymerization:	Will not occur.
Dust explosion hazard (solids):	None
Special hazards:	Corrosive
Hazardous decomposition products:	Carbon monoxide, Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritant
Skin contact:	Irritant
Inhalation:	Irritation to the respiratory tract.
Ingestion:	Irritating to the digestive tract.
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:	Bladder and kidney
Sensitization:	Not known to cause allergic reactions.
Other:	None

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	Harmful to the environment.
Degradability:	Not known

Other: None

13. DISPOSAL CONSIDERATIONS

Products: Dispose of by incineration (preferred) or chemical De-activation or other acceptable method in accordance with local regulations.

14. TRANSPORT INFORMATION

UN Number: 1779
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:
ADR Danger ID:
ADR Label:

15. REGULATORY INFORMATION

Symbols: 

Signal word: Irritant

Risks: R36/37/38 - irritating of eyes skin and respiratory systems.

Safety advice: S26 - rinse immediately with plenty of water and seek medical attention in case of eye contact.

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 shall we 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: **KMA031**

Effective Date: December-2023

Version: 2.0

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

Identification of the substance or preparation:

High Temperature Inhibitor Aid: KMA031

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2nd Industrial City, 6th Street, 101 Intersection,
Postal code 34334, Kingdom of Saudi Arabia.

Emergency phone:

Tel: +966 56 917 2181

2. HAZARDS IDENTIFICATION

Main health hazards:

May be mildly irritating to eyes. Harmful if swallowed.

Main environmental hazards:

None known

Main physical hazards:

Special precautions:

None

Physical hazard:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS #
Potassium Salt	90-100	-

4. FIRST AID MEASURES

Eye contact:

Immediately flush eyes with water for 15 minutes. Holding eyelids open. Seek medical attention.

Skin contact:

Rinse with water.

Inhalation:

Remove to fresh air.

Swallowing:

If several grams are swallowed, immediate medical attention is required. If delayed, consider inducing vomiting with ipecac or other means. Give milk or water after vomiting.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

None needed

Further Information:

None known

NFPA Rating:

Health 3 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:

No special precautions requisite.

Packaging requirements:

Paper bags (minimum 3 ply), or other industrial containers designed for powders and granulated materials.

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 Neoprene.
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:	Colorless to white
Odor:	None
pH value:	7.0-8.0 (1.0 wt.% water solution)
Boiling point:	1420°C
Pour point:	686°C
Flash point:	Not combustible
Method:	Not applicable
Flammability (explosion limits in air):	
Lower:	Not applicable
Upper:	Not applicable
Auto flammability (auto-ignition temperature):	Not applicable
Vapor pressure:	0.13 kPa (745°C)
Relative density (specific gravity):	2.55-2.75
Bulk Density (solids):	1550 kg/m ³
Solubility in water:	1400 g/L
Viscosity:	Not applicable
Relative Vapor Density (air=1):	>1
% Volatile:	0

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not determined
Materials to avoid:	Oxidizers
Hazardous Polymerization:	Will not occur
Dust explosion hazard (solids):	Not applicable
Special hazards:	None
Hazardous decomposition products:	None

11. TOXICOLOGICAL INFORMATION

Eye contact:	Mildly irritating
Skin contact:	No effect expected
Inhalation:	No effect expected
Ingestion:	Harmful if swallowed; large amounts may cause illness. LD50 (rat) = 1000 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:	Reproductive
Sensitization:	Not known to cause allergic reactions.
Other.	None

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 landfilling 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:	
IATA Description:	Not regulated
Class:	
Sub Risk:	
Package Group:	
Label:	
ADR Description:	Not regulated
ADR class/item:	
ADR Danger ID:	
TREM Card:	
ADR Label:	

15. REGULATORY INFORMATION

Symbols:	
Risks:	Evaluated as 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 shall we 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: **KMA034C**

Effective Date: December-2023

Version: 2.0

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

Identification of the substance or preparation:

Corrosion Inhibitor: KMA034C

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:

None known

Main physical hazards:

Special precautions:

None

Physical hazard:

The product is non-explosion.

Main health hazards:

Have a stimulating effect on the mucosa, eye and skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
1-dodecylpyridinium Bromide:	25-35	104-73-4
2-benzoylallyl alcohol:	15-25	15121-79-6
Octaphenyl polyoxyethethyiene:	5-15	14409-72-4
Water:	20-35	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Immediately overturn eyelid, washing with a large amount of fresh water or saline thoroughly. Medical treatment.

Skin contact:

Immediately remove contaminated clothing, rinsing with plenty of fresh water.

Inhalation:

Rapidly remove from the scene and expose to fresh air. Giving oxygen If breathing is difficult. Medical treatment.

Ingestion:

Drink enough warm water, induce vomiting. Medical treatment.

5. FIRE-FIGHTING MEASURES

Special protective equipment:

Firefighters are required to wear gas masks, wearing full-body fire service in the wind direction.

Fire extinguishing agent:

Water spray, foam, dry powder, carbon dioxide, sand.

Fire hazard grade Hazardous combustion products:

CO, CO₂ and Nitrogen oxides.

Causions:

Combustible in case of fire or high temperature. Release of toxic gases by thermal decomposition, or in case of high temperature.

6. ACCIDENTAL RELEASE MEASURES

Emergency treatment:

Evacuate rapidly from contaminated areas to a safe area, and isolation or strict restrictions on access. Cutting off the source of fire. Recommending emergency personnel to wear self-sufficient type respirator, or wear protective clothing. Avoid dust, carefully scan, bag placed transfer to a safe place. If a large number of leaks, covered with plastic cloth, canvas. Collection of recycling or shipped to the disposal of waste

disposal sites.

7. HANDLING AND STORAGE

Handling precautions:

Closed operation and local exhausting. Prevent vapor leakage into the air of workplace. The operator must go through specialized training, strictly abide by rules. Proposed operators wear self-absorption filter respirators (half-mask), wearing chemical protective safety glasses, wearing protective overalls on infiltration, wearing rubber gloves. Keeping far away from fire, heat source, workplace smoking. Use explosion proof ventilation systems and equipment. Welding, cutting and other operations were not permitted prior to Clearing off the liquid and vapor. Avoid smoking. Avoiding contacting with oxidizing agents, acids. Equipped with the appropriate variety and number of fire equipment and emergency treatment equipment. Harmful residues may be left by empty containers.

Special precautions for storage:

Store in a cool, ventilated warehouse. Keep away from fire and heat. Prevent direct sunlight. Keep the container sealed. Keep separate from oxidants, acids, food chemicals. Equipped with the appropriate variety and quantity of fire equipment. Storage areas should be equipped with emergency treatment equipment and materials suitable for storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:

Closed operations, local exhausting.

Respiratory protection:

Wear self-absorption filter mask (half mask) when the air concentration exceed the standard concentration. Wear air respirator in emergency rescue or evacuation.

Eye protection:

Wear chemical safety glasses.

Body protection:

Wear protective overalls on infiltration.

Hand protection:

Wear rubber gloves.

Other protection:

Wash clothes timely. Maintain good health habits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:

Liquid

Color:

Dark brown

Odor:

Slight

pH value:

3.0-7.0

Boiling point:

$\leq 100^{\circ}\text{C}$

Melting point:

$\geq -3^{\circ}\text{C}$

Flash point:

Not available

Flammability (explosion limits in air):

The product is not flammable or explosive.

Lower:

Not applicable

Upper:

Not applicable

Auto-flammability (auto-ignition temperature):

Not applicable

Vapor pressure:

Not determined

Relative density (specific gravity):

0.92-0.97

Solubility:

Soluble in water, soluble in Ethanol, ethyl ether.

Viscosity:

Not available

Relative vapor density (air=1):

Not determined

Volatile%:

N/A

10. STABILITY AND REACTIVITY

Stability:	Stable under the condition of room temperature.
Conditions to avoid:	Avoid mixing with oxidizing agents together.
Prohibited mixture:	Strong oxidizing agents.
Hazardous polymerization:	The products may not polymerize in normal conditions.
Decomposition products:	Carbon monoxide, carbon dioxide. But it is difficult to burn.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	LD50: 2000 mg/kg(oral); 1288 mg/kg (rat oral) LC50: no data
Skin irritation or corrosion:	No obvious
Eye irritation or corrosion:	May cause irritation or corrosion on eyes.
Allergic respiratory or skin:	Not clear
Germ cell mutagenicity:	Not clear
Carcinogenicity:	Not clear
Reproductive toxicity:	Not clear
Specific target organ toxicity-once contact:	Not clear
Specific target organ toxicity-repeated exposure:	Not clear
Inhalation hazard:	Too much solvent inhalation may cause hazard

12. ECOLOGICAL INFORMATION

Eco toxicity	Not clear
Persistence and degradation	Biodegradability
Bioconcentration or bioaccumulation	No
Migration in soil	No
Other deleterious effects	No

13. DISPOSAL CONSIDERATIONS

Waste properties:	Not belong to the dangerous materials.
Waste disposal method:	Obey the relevant national and local laws and regulations before disposal. Recommended for incineration, producing carbon dioxide.
Disposal considerations:	Also can be naturally degraded in the environment.

14. TRANSPORT INFORMATION

International standards:	Not regulated
IMDG:	Not regulated
Transport considerations:	Inspect that packaging container is integrated and sealed or not before Transportation. Ensure that the container does not leak, does not collapse, does not fall, does not damage during transportation. It is strictly prohibited in transportation by Mixing with acids, oxidants, food, and food additives. Transport vehicles should be equipped with the appropriate variety and number of fire equipment and emergency treatment equipment. preventing insolation, rain, high temperature during transportation. Do not stay in residential areas and densely populated area, and accord to the provisions of routes in highway transportation.

15. REGULATORY INFORMATION

Regulations on safety management of hazardous chemicals (issued by the State Council on February 17, 1987), the detailed rules for the implementation of regulations on safety management of hazardous chemicals (of labor [1992] No. 677), the safe use of chemicals regulation in workplace ([1996] Ministry of Labor No. 423). Corresponding stipulation was made according to the dangerous chemical safety, production, storage, transportation, loading and unloading etc. The material designated as Section 6.1 class of toxic chemicals by

hazardous chemicals commonly used classification and marking (GB 13690-92).

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***