

Safety Data Sheet

PRODUCT CODE: **KMA003**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Iron Reducing Agent: KMA003

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:

May be irritating to eyes, and skin.

Main environmental hazards:

None known

Main physical hazards:

None

Special precautions:

None

Physical hazard:

Dust explosive

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Erythorbic acid salt	90-100	6381-77-7

4. FIRST AID MEASURES

Eye contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs.

Skin contact:

Rinse thoroughly with soap and water. Seek medical attention if irritation occurs.

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:

Water fog, CO₂, Foam, Dry chemicals.

Further information:

Dust explosion hazards, wear fire-fighting clothes and avoid breathing vapors.

NFPA Rating:

Health 2 Flammability 3 Reactivity 0 Other: None.

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:

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

Ventilation:

Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Use respirator with dust and mist protection (P2, white).
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of PVC Butyl.
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:	Powder
Color:	White
Odor:	None
pH value:	5.0-8.0 (5.0 wt.% water solution)
Boiling point:	168-170°C
Pour point:	Not available
Flash point:	Not available
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):	1.62-1.82
Bulk density (solids):	600 kg/m ³
Solubility in water:	16.0 g/100 mL (25°C)
Viscosity:	Not applicable
Relative vapor density (air=1):	Not applicable
%Volatile:	0

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not known
Materials to avoid:	Acids and oxidizers.
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Yes
Special hazards:	None
Hazardous decomposition products:	Carbon and nitrogen oxides or organic fumes are released when burned or heated strongly.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritating
Skin contact:	Irritating expected
Inhalation:	Not known
Ingestion:	Mildly irritating LD50 (rats) = 3030 g/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:	Bladder and kidney.
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 biodegradable, COD = 0.42 P/P

Other: None known

13. DISPOSAL CONSIDERATIONS

Product: Dispose of by incineration (preferred) or chemical. De-activation 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: 1604

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:



Signal word: Irritant

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

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

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: **KMA003B**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

Iron Stabilizer: KMA003B

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:

May be irritating to eyes, and skin.

Main environmental hazards:

None known

Main physical hazards:

Special precautions:

None

Physical hazard:

Dust explosive

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
EDTA Sodium Salt	90-100	10378-23-1

4. FIRST AID MEASURES

Eye contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs.

Skin contact:

Rinse thoroughly with soap and water. Seek medical attention if irritation occurs.

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.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Water fog, CO₂, Foam, Dry chemicals.

Further information:

Dust explosion hazards, wear fire-fighting clothes and avoid breathing vapors.

NFPA Rating:

Health 2 Flammability 3 Reactivity 0 Other: None.

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:

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

Ventilation:

Provide ventilation to keep airborne concentrations below exposure limits.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	Use respirator with dust and mist protection (P2, white).
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of PVC Butyl.
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:	Powder
Color:	White
Odor:	None
pH value:	10.0-11.0 (1.0 wt.% water solution)
Boiling point:	Not known
Pour point:	>300°C
Flash point:	>100°C
Method:	Not applicable
Flammability (explosion limits in air):	
Lower:	Not applicable
Upper:	Not applicable
Auto-flammability (auto-ignition temperature):	Not applicable
Vapor pressure:	Not applicable
Relative density (specific gravity):	1.57-1.77
Bulk density (solids):	600 kg/m ³
Solubility in water:	450g/L (25°C)
Viscosity:	Not applicable.
Relative vapor density (air=1):	<0.0013 kPa
Volatile%:	0

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not known
Materials to avoid:	Acids and oxidizers.
Hazardous polymerization:	Will not occur.
Dust explosion hazard (solids):	Yes
Special hazards:	None
Hazardous decomposition products:	Carbon and nitrogen oxides or organic fumes are released when burned or heated strongly.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritating
Skin contact:	Irritating expected
Inhalation:	Not known
Ingestion:	Mildly irritating LD50 (rats) = 3030 g/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:	Bladder and kidney.
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 biodegradable, COD = 0.42 P/P

Other: None known

13. DISPOSAL CONSIDERATIONS

Product: Dispose of by incineration (preferred) or chemical De-activation 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: 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:



Signal Word: Irritant

Risk: R36/37/38 - irritating to eyes, skin and respiratory systems.

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

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

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*** 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:

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*** 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

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*** 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

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*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KMA033**

Effective Date: December-2023

Version: 1.0

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

Identification of the substance or preparation:

Iron Stabilizer: KMA033

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:

None

Main health hazards:

May be irritating to eyes, and respiratory if inhaled.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Organic Acid	25-30	-
Organic Salt	10-20	-
Water	50-65	7732-18-5

4. FIRST AID MEASURES

Eye contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs.

Skin contact:

Rinse with water.

Inhalation:

Remove to fresh air.

Swallowing:

Rinse mouth with water. See medical attention if irritating occurs.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Foam, Dry chemical, CO₂

Further information:

Wear firefighting clothing and avoid breathing vapors. Use SCBA in closed area. Corrosive when wet.

NFPA Rating:

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

Combustion products:

see Section 10.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:

Absorb into dry earth or sand. Transfer to a closable, labeled salvage container for disposal by an appropriate method. Rinse the contaminated surface with water.

See Section 8 for protective equipment information.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

Special precautions:

None

Packaging requirements:

HDPE drums.

Ventilation:

Provide ventilation and dry storage area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection:	
Eye protection:	Chemical splash goggles.
Hand protection:	Impervious gloves made of PVC Butyl.
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:	Colorless
Odor:	Irritate
pH value:	7.0-8.0
Boiling point:	Not determined
Pour point:	Not determined
Flash point:	Not determined
Vapor pressure:	Not determined
Relative density (specific gravity):	1.12-1.17
Solubility in water:	Soluble

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Not determined
Materials to avoid:	Bases, oxidizers
Hazardous polymerization:	Will not occur
Dust explosion hazard (solids):	None
Special hazards:	None
Hazardous decomposition products:	Carbon oxides and organic fumes are generated when heated strongly or burned.

11. TOXICOLOGICAL INFORMATION

Eye contact:	Irritating, may cause redness.
Skin contact:	Light irritation may occur.
Inhalation:	No effect expected
Ingestion:	May cause light soreness and redness of the mouth and throat after swallowing.
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 if repeated skin exposure.

12. ECOLOGICAL INFORMATION

Information on product as a whole:	
Main environmental hazards:	None known
Degradability:	Biodegradable
Other:	None known

13. DISPOSAL CONSIDERATIONS

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

15. REGULATORY INFORMATION

Symbols:	Irritant
Risk phrases:	R36 - Irritating to eyes.
Safety advice:	S26 - In case of eye contact, rinse with plenty of water and seek for medical attention.
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:**

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*** END OF SDS***

Safety Data Sheet

PRODUCT CODE: **KMA036**

Effective Date: December-2023

Version: 1.0

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

Identification of the substance or preparation:

Emulsifier: KMA036

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

Hazard Classification

Not classified.

Label Elements:

Hazard Pictogram:



Signal Word:

Warning

Hazard Statement:

Not applicable

Precautionary Statement:

Not applicable

Other hazards which do not result in
GHS classification:

None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS#
Non-Ionic Surfactant	50-70	-
Solvent	30-50	-

4. FIRST AID MEASURES

Eye contact:

Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Skin contact:

Wash with soap and water. If skin irritation occurs, get medical attention.

Inhalation:

Remove to fresh air. Seek medical attention at once.

Swallowing:

Treat symptomatically. Get medical attention. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed:

Symptoms:

See section 11. indication of immediate medical attention and special treatment needed.

Treatment:

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

General Fire Hazards:

No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable Extinguishing media:

CO₂, dry chemical, foam

Unsuitable Extinguishing media:

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical:

A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

Special protective equipment and precautions for firefighters:

Special firefighting procedures:	No data available
Special protective equipment for fire-fighters:	Wear full protective fire gear including self-containing breathing apparatus operated in the positive pressure mode with full face piece, coat, pants, gloves and boots.

6. ACCIDENTAL RELEASE MEASURES

After spillage/leakage:	Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.
See Section 8 for protective equipment information.	
See Section 13 for disposal information.	

7. HANDLING AND STORAGE

Special precautions:	Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment.
Conditions for safe storage including any incompatibilities:	Store away from incompatible materials.
See section 10 for incompatible materials.	

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:	
Occupational Exposure Limits:	None of the components have assigned exposure limits.
Appropriate engineering controls:	No special requirements under ordinary conditions of use and with adequate ventilation.
Individual protection measures, such as personal protective equipment:	
General information:	Use personal protective equipment as required.
Eye/face protection:	If contact is likely, safety glasses with side shields are recommended.
Skin Protection:	
Hand Protection:	Suitable gloves can be recommended by the glove supplier
Other:	No data available.
Respiratory Protection:	Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Light brown to dark brown
Odor:	Mild
pH value:	N/A
Boiling point:	No data available
Flash point:	>115°C (Pensky-Martens Closed Cup)
Flammability (explosion limits in air):	
Lower:	No data available
Upper:	No data available
Vapor pressure:	No data available
Relative density (specific gravity):	0.90-0.95

Solubility in water:	Insoluble in water
Solubility (Other)	No data available
Viscosity:	25,500 mm ² /s (40°C) 530 mm ² /s (100°C)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Materials to avoid:	None known, avoid contact with reactive chemicals.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

Eye contact:	No data available
Skin contact:	No data available
Inhalation:	No data available
Ingestion:	No data available
Information on toxicological effects	
Acute Toxicity	
Oral: LD 50 (Rat):	> 5,000 mg/kg (Read across) Not classified
Dermal: LD 50 (Rabbit):	> 2,000 mg/kg (Read across) Not classified
Inhalation:	Not classified for acute toxicity based on available data.
Skin Corrosion/Irritation	Classification: Not irritating (Read across); Rabbit. Remarks: Not classified as a primary skin irritant.
Serious Eye Damage/Eye Irritation	Classification: Not irritating (Read across); Rabbit. Remarks: Not classified as a primary eye irritant.
Respiratory sensitization:	No data available
Skin sensitization:	No data available
Specific Target Organ Toxicity - Single Exposure	No data available
Aspiration Hazard:	No data available Chronic Effects
Carcinogenicity:	No data available
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:	No carcinogenic components identified
US. National Toxicology Program (NTP) Report on Carcinogens:	No carcinogenic components identified
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):	No carcinogenic components identified
Germ Cell Mutagenicity:	No data available
Reproductive toxicity:	No data available
Specific Target Organ Toxicity - Repeated Exposure:	No data available

12. ECOLOGICAL INFORMATION

Information as a product as a whole:	
Main environmental hazards:	None known
Degradability:	No data available
Other:	None known

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

DOT:	Not regulated
IMDG:	Not regulated
IATA:	Not regulated
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	None known

The DOT shipping information in this section is based on a bulk container. Please review the accompanying shipping papers for the correct shipping descriptions based the size of the package. Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. During transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

15. REGULATORY INFORMATION

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4): None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA):

SARA 311 Classifications:	None known.
SARA 302 Extremely Hazardous Substance:	None present or none present in regulated quantities.
SARA 304 Emergency Release Notification:	None present or none present in regulated quantities.
SARA 313 (TRI Reporting)	None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65 Inventory Status: No ingredient regulated by CA Prop 65 present.

Inventory Status:

Australia (AICS):	All components are in compliance with chemical notification requirements in Australia.
Canada (DSL/NDL):	This product contains a substance that is not listed on the Canadian Domestic Substances List (DSL).
China (IECSC):	This product contains a substance or polymer that has been notified and is restricted to import by the notifier.
Japan (ENCS):	This product contains a substance that is not listed on the Japanese Existing and New Chemical Substances (ENCS) list.
Korea (ECL):	This product requires notification before sale in Korea.
New Zealand (NZIoC):	This product requires notification before sale in New Zealand.
Philippines (PICCS):	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
Switzerland (SWISS):	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Taiwan (TCSCA):	This product requires notification before sale in Taiwan.
United States (TSCA):	All components of this material are on the US TSCA Inventory.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

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: **KMA054**

Effective Date: December-2023

Version: 1.0

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

Identification of the substance or preparation:

Corrosion Inhibitor: KMA054

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:

Prepared according to Global Harmonized System (GHS) standards:

Flammable liquids:	Category 3
Acute Toxicity (Oral):	Category 4
Skin corrosion/Irritation:	Category 2
Serious Eye Damage/Eye Irritation:	Category 1
Skin sensitizer:	Category 1
Toxic to reproduction:	Category 1B
Specific Target Organ Toxicity - Repeated	Category 2

Exposure:

Acute hazards to the aquatic environment: Category 3

Chronic hazards to the aquatic environment: Category 3

Label Elements:



Signal Word:

Danger

Hazard Statement(s):

H227 - Combustible liquid.

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H360 - May damage fertility or the unborn child.

H373 - May cause damage to organs through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statement:

Prevention:

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 - Do not breathe dust / fume / gas / mist / vapors / spray.

P264 - Wash hands thoroughly after handling.

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

P272 - Contaminated work clothing should not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing / eye protection/face protection.

Response:	<p>P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell.</p> <p>P330 - Rinse mouth.</p> <p>P302+P352 - IF ON SKIN: Wash with plenty of water.</p> <p>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P321 - Specific treatment (see this label).</p> <p>P362+P364 - Take off contaminated clothing and wash it before reuse.</p> <p>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 - Immediately call a POISON CENTER / doctor.</p> <p>P308+P313 - IF exposed or concerned: Get medical advice/attention.</p> <p>P370+P378 - In case of fire: Use CO₂, dry chemical or foam for extinction.</p> <p>Water can be used to cool and protect exposed material.</p>
Storage:	<p>P403+P235 - Store in a well-ventilated place. Keep cool.</p> <p>P405 - Store locked up.</p>
Disposal:	<p>P501 - Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.</p>
Other hazards which do not result in GHS classification:	<p>None identified</p>

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS #
Ethylene Glycol	30-40	107-21-1
Quaternary Ammonium Compound	25-30	Proprietary
Dimethylformamide	20-30	68-12-2
Decyl Alcohol (mixed isomers)	5-10	85566-12-7
Surfactant	3-8	Proprietary

4. FIRST AID MEASURES

General:	Get medical advice/attention if you feel unwell.
Description of first aid measures:	
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Skin contact:	Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. Call a POISON CENTER/doctor if you feel unwell. Launder contaminated clothing before reuse.
Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
Swallowing:	Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.
Most important symptoms and effects, both acute and delayed:	See section 11
Indication of any immediate medical attention and special treatment needed.	
Treatment:	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

General Fire Hazards:	Move containers from fire area if you can do so without risk.
Extinguishing media (Suitable extinguishing media:):	CO ₂ , Dry chemical or Foam.
Unsuitable extinguishing media:	Water can be used to cool and protect exposed material.
Specific hazards arising from the chemical:	Not determined
	Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. See section 10 for additional information.
Advice for firefighters.	
Special fire-fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Wear full protective fire-gear including self-containing breathing apparatus operated in the positive pressure mode with full face-piece, coat, pants, gloves and boots.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep upwind. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment.
Environmental Precautions:	Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
Methods and material for containment and cleaning up:	Eliminate all ignition sources if safe to do so. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.
Reference to other sections:	See sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust / fume / gas / mist / vapors/spray. Do not get in eyes, on skin, on clothing. Observe good industrial hygiene practices. Use only in well ventilated areas. Use personal protective equipment as required. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Launder contaminated clothing before reuse. Avoid environmental contamination.
Maximum Handling Temperature:	Not determined
Maximum Storage Temperature:	Not determined
Conditions for safe storage, including any incompatibilities:	Keep cool. Store in a well-ventilated place. Do not store near potential sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters
Occupational Exposure Limits (source: US. ACGIH Threshold Limit Values (02 2012):

Chemical name	Type	Exposure Limit Values
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Exposure Limit Values	Ceiling	100 mg/m ³
Dimethylformamide	TWA	10 ppm
Butyl cello solve	TWA	20 ppm
Isopropyl alcohol	TWA	200 ppm
Isopropyl alcohol	STEL	400 ppm

Appropriate engineering controls: Use material in well ventilated area only. No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment.

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear tight-fitting goggles or face shield.

Skin protection Hand Protection: Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.

Other: Chemical resistant boots. Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material.

Respiratory Protection: A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Use respirator with a combination organic vapor and dust/mist cartridge. Use respirator if irritation is experienced or if the recommended exposure limit is exceeded.

Hygiene measures: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices. Do not get this material in contact with skin. Do not eat, drink or smoke when using the product. Do not get in eyes. Avoid contact with skin. Wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Do not get in eyes. Avoid contact with skin. Wash contaminated clothing before reuse. When using do not smoke. Wash hands before breaks and immediately after handling the product. Wash hands after handling. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical state:	Liquid
Form:	Clear liquid
Color:	Dark red
Odor:	Alcohol
Odor threshold:	No data available

pH value:	N/A
Freezing point:	>5°C
Boiling point:	No data available
Flash point:	72°C (CC)
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower limit on flammability or explosive limits:	
Flammability limit - Upper (%):	No data available
Flammability limit - Lower (%):	No data available
Vapor pressure:	No data available
Vapor density (air=1):	No data available
Relative density (specific gravity):	1.00-1.05
Solubility	
Solubility in Water:	Dispersible
Solubility (other):	No data available
Partition coefficient (n-octanol/water):	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Pour point temperature:	No data available

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Hazardous decomposition products:	None
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Alkalies, Bases, Oxidizing agents, Hypochlorites, and Materials reactive with hydroxyl compounds. Avoid reactive metals such as sodium, calcium, zinc, etc. Reaction with peroxides may result in violent decomposition of peroxide possible creating an explosion. Reducing agents. Halogens and halogenated compounds.
Hazardous Decomposition Products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, nitrogen oxides, and other products of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	Harmful if inhaled.
Inhalation:	
Eye contact:	Causes serious eye damage.
Skin contact:	May be harmful in contact with skin. Causes skin irritation.
Ingestion:	Harmful if swallowed.
Information on toxicological effects:	
Acute toxicity	
Oral	Ingestion can cause central nervous system effects such as headache, dizziness, drowsiness, and generalized weakness. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. Ingestion may cause red blood cell hemolysis and possible liver and kidney injury. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in

	severe injury to the lungs and death. ATE mix 300 - 2000 mg/kg.
Dermal:	Prolonged or widespread contact with this material could result in the absorption of potentially harmful amounts. Skin absorption of components of this material will cause systemic effects; note toxicity in other sections.
	ATE mix > 5000 mg/kg
Inhalation:	High concentrations may cause headaches, dizziness, weakness, irritability and other behavioral changes, nausea, and vomiting. Breathing high vapor concentrations may cause adverse central nervous system effects such as dizziness, light-headedness, headache, drowsiness, nausea and loss of coordination. High concentrations may cause headaches, dizziness, nausea, stupor, and other central nervous system effects leading to visual impairment, difficulty breathing and convulsions.
Skin Corrosion/Irritation:	Causes skin irritation. Remarks: Prolonged or repeated exposure may cause a slight flaking, tenderness, and softening of skin. Prolonged or repeated contact as from clothing wet with the material may cause burns. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin. Prolonged or repeated contact may cause irritation. Prolonged and repeated exposure causes defatting and cracking of the skin.
Serious Eye Damage/Eye Irritation:	Remarks: Causes serious eye damage.
Respiratory sensitization:	Remarks: There are rare, inconclusive reports of human sensitization with N, N-dimethylformamide.
Skin sensitization:	Not a skin sensitizer. (Literature)
Specific Target Organ Toxicity - Single Exposure:	Nose, throat and lung irritant.
Aspiration Hazard:	No data available
Other effects:	May cause drowsiness or dizziness.
Chronic Effects Carcinogenicity:	Not available
Germ Cell Mutagenicity:	Not available
Reproductive toxicity:	Not Classified based on available data.
Specific Target Organ Toxicity - Repeated Exposure:	Repeated overexposure may result in liver, lung and kidney damage.

12. ECOLOGICAL INFORMATION

Ecotoxicity	
Fish:	
Toxicity to microorganisms:	Not Available
Persistence and Degradability:	Not Available
Biodegradation:	90 - 100 %, readily biodegradable.
Toxicity:	No additional information available.
Toxicity to aquatic plants:	No data available
Toxicity to soil dwelling organism:	No data available
Sediment Toxicity:	No data available
Toxicity to Terrestrial Plants:	No data available
Toxicity to Above-Ground Organisms:	No data available
Mobility in Soil:	Not available
Bioaccumulate Potential:	
Bioconcentration Factor (BCF):	Not available
Other Adverse Effects Other Information:	Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Disposal methods:	Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/ Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.
Contaminated Packaging:	Container packaging may exhibit hazards.

14. TRANSPORT INFORMATION

IATA Description:	
International standards:	Not regulated
IMDG:	Not regulated
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	None known

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

Inventory Status:	
Australia (AICS):	May require notification before sale under Australian regulations.
Canada (DSL/NDL):	This product contains a substance or polymer that has been notified and is restricted to import by specific legal entities.
China (IECSC):	This product may require notification in China.
Japan (ENCS):	May require notification in Japan.
Philippines (PICCS):	May require notification before sale under Philippines Republic Act 6969.
Switzerland (SWISS):	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Taiwan (TCSCA):	This product requires notification before sale in Taiwan.
United States (TSCA):	All components of this material are on the US TSCA Inventory.
The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.	
US Federal & International Regulations:	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

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***