

## 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, CO<sub>2</sub>, 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 <sup>3</sup> ):	No components have established exposure limits. Dust particles: total = 10 mg/m <sup>3</sup> , respirable fraction = 5 mg/m <sup>3</sup> .

## **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 <sup>3</sup>
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**



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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, CO<sub>2</sub>, 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 <sup>3</sup> ):	No components have established exposure limits. Dust particles: total = 10 mg/m <sup>3</sup> , respirable fraction = 5 mg/m <sup>3</sup> .

## **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 <sup>3</sup>
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: **KMA007**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

**Viscoelastic Surfactant: KMA007**

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:

Toxic to aquatic organisms.

Main physical hazards:

Special precautions:

Physical hazard:

Flammable

Main health hazards:

Severe irritations to eyes, Irritation and harmful if swallowed, dizziness.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

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

### **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 for 15 minutes, seek medical attention if irritation occurs.

Inhalation:

Remove to fresh air.

Swallowing:

Do not induce vomiting. Give 2 glasses of milk or rinse mouth with water. Seek medical attention if irritation occurs.

Note:

None

### **5. FIRE-FIGHTING MEASURES**

Extinguishing media:

Water fog, alcohol foam, CO<sub>2</sub>, dry chemical.

Further information:

Vapor may travel along the ground. Avoid breathing.

NFPA Rating:

Health 3; Flammability 3; 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 residual on inert absorbent (sand).

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.

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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.
Exposure limit guidelines (mg/m <sup>3</sup> ):	No components have established exposure limits.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form:	Liquid
Color:	Light brownish
Odor:	Faint
pH value:	6.0-7.0 (1.0 vol.% aqueous alcohol solution)
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 temperature):	Not determined
Vapor pressure:	Not determined
Relative density (specific gravity):	0.95-1.05
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, nitrogen oxides, 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**

Product:	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:	Not regulated
Class:	
Sub Risk:	
Package Group:	
Label:	
ADR Description:	Not regulated
ADR class/item:	
ADR Danger ID:	

## **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, 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: **KMA007A**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

**Ultra-high Temperature Viscoelastic Surfactant: KMA007A**

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

Flammable liquids, Category 2:

H225 - Highly flammable liquid and vapor.

Serious eye damage, Category 1:

H318 - Causes serious eye damage.

Specific target organ toxicity single exposure  
Category 3:

H336 - May cause drowsiness or dizziness. (Central nervous system)

Pictogram



Signal word:

Danger

Precautionary Statements:

General Prevention:

None

P210 - Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.

P233 - Keep container tightly closed.

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

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

Response:

P303 + P361 + P353 - IF ON SKIN (or hair) Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P312 - IF INHALED Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 + P310 - IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P370 + P378 - In case of fire Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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

**4. FIRST AID MEASURES**

Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical advice/attention.
Skin contact:	Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. Use a mild soap if available. If skin irritation occurs, seek medical advice/attention.
Inhalation:	Move to fresh air in case of accidental inhalation of vapors. Keep at rest. Consult a physician if necessary. Consult a physician after significant exposure.
Swallowing:	Do not induce vomiting without medical advice. Rinse mouth with water. Keep at rest. Do not give anything to drink. Consult a physician if necessary.
Notes:	None

**5. FIRE-FIGHTING MEASURES**

Extinguishing media:	Multi-purpose powders, CO <sub>2</sub> , Foam, Water spray.
Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	Highly flammable liquid and vapor. Under fire conditions, highly flammable gas is released, which increases fire/explosion hazards. Fire or intense heat may cause violent rupture of packages. Flash back possible over considerable distance. Hazardous decomposition products formed under fire conditions. On heating highly toxic gases are released.
Special protective equipment:	Wear full protective clothing and self-contained breathing apparatus. Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.
Specific firefighting methods:	Stay upwind. Pay attention to flashback. Suppress (knock down) gases/vapors/mists with a water spray jet. Fight fire with normal precautions from a reasonable distance. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product. Remove undamaged containers from fire area if it is safe to do so.
Further information:	Evacuate personnel to safe areas. Intervention only by capable personnel who are trained and aware of the hazards of the product. Never approach containers which have been exposed to fire, without cooling them sufficiently. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Combustion products:	see Section 10.

**6. ACCIDENTAL RELEASE MEASURES**

After spillage/leakage:	
Prohibition:	No sparking tools should be used.
Methods for containment:	Stop leak if safe to do so. dam up with sand or inert earth (do not use combustible materials).
Recovery:	Absorb the product onto porous material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Use approved industrial vacuum cleaner for removal. Keep in

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Decontamination/cleaning:	suitable, closed containers for disposal. Wash with plenty of water and detergent. Clean contaminated surface thoroughly. Recover the cleaning water for subsequent disposal.
Disposal:	Dispose of as hazardous waste in compliance with local and national regulations.
Environmental precautions:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil.

See Section 8 for protective equipment information.

## **7. HANDLING AND STORAGE**

Special precautions:	Handle in accordance with good industrial hygiene and safety practice. The product must only be handled by specifically trained employees. Vapors are heavier than air and may spread along floors. Do not use in areas without adequate ventilation. Vapor extraction at source. Do NOT handle in a confined space. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Take precautionary measures against static discharges. Prevent the build-up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations. Ground/bond container and receiving equipment. Use only non-sparking tools. Wear clothes and shoes which dissipate static electricity. Wear personal protective equipment. Do NOT handle without gloves. Avoid inhalation, ingestion and contact with skin and eyes. Avoid splashes. Avoid formation of aerosol.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.
Storage:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in a bunded area. Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible materials to be indicated by the manufacturer. Keep locked up or in an area accessible only to qualified or authorized persons. Keep away from: Strong oxidizing agents.
Packaging requirements:	Stainless Steel or Coated metal container, not plastic materials.
Storage temperature:	0-35°C

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory protection:	In the case of vapor formation use a respirator with an approved filter. Recommended Filter type: Organic vapor type.
Eye protection:	Chemical splash goggles.
Hand protection:	Where there is a risk of contact with hands, use appropriate gloves. Gloves must be inspected prior to use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the

gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection:

Wear fire resistant and antistatic coveralls- Full protective suit- Antistatic boots.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.

Protective measures:

Emergency equipment immediately accessible, with instructions for use. Ensure that eyewash stations and safety showers are close to the workstation location. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use. The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment.

Environmental exposure controls:

Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil.

Engineering measures:

Effective exhaust ventilation system. Extract at emission point. Ensure that extracted air cannot be returned to the workplace through the ventilation system. Use only in an area equipped with explosion proof exhaust ventilation. Use only in an area equipped with flame proof exhaust ventilation. Avoid splashes. Avoid formation of aerosol.

Exposure Limit Guidelines (mg/m<sup>3</sup>):

Components with national occupational exposure limits:

Components	Value Type	Value	Basis
Propan-2-ol	PEL (long-term)	400 ppm 983 mg/m <sup>3</sup>	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances.
Propan-2-ol	PEL (short term)	500 ppm 1,230 mg/m <sup>3</sup>	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances.

Components with other occupational exposure limits

Components	Value Type	Value	Basis
Propan-2-ol	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV).
Propan-2-ol	STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV).

Biological Exposure Indices

Components	Value Type	Value	Basis
Propan-2-ol	BEI	40 mg/l Acetone Urine End of shift at	ACGIH - Biological Exposure Indices (BEI).

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Form:	Liquid
Color:	Amber-yellow
Odor:	Faint
pH value:	7.0-8.0 (1.0 vol.% aqueous alcohol solution)
Boiling point/Boiling range:	80°C (data based on similar products)
Pour point:	0°C
Flash point:	20°C closed up (data based on similar products)
Flammability (explosion limits in air):	
Lower:	Not available
Upper:	Not available
Auto flammability (auto-ignition temperature):	Not available
Vapor pressure:	Not available
Relative density (specific gravity):	1.00-1.05
Viscosity:	Not available
Solubility in water:	Miscible
Oxidizing properties	Not considered as oxidizing, Structure-activity relationship (SAR).

**10. STABILITY AND REACTIVITY**

Chemical Stability:	Stable under recommended storage conditions.
Reactivity	Stable at normal ambient temperature and pressure.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition. Direct sources of heat.
Materials to avoid:	Strong Oxidizers
Possibility of Hazardous Reactions:	possible with gas/vapor and air mixtures above flash point.
Special hazards:	None
Hazardous decomposition products:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke), Nitrogen oxides (NOx), Sulphur oxides.

**11. TOXICOLOGICAL INFORMATION**

Eye contact:	Risk of serious damage to eyes. According to the available data on the components. According to the classification criteria for mixtures.
Skin contact:	Not classified as irritating to skin. According to the available data on the components. According to the classification criteria for mixtures.
Inhalation:	Does not cause respiratory sensitization. According to the available data on the components. According to the classification criteria for mixtures.
Carcinogenicity:	According to the available data on the components. The product is not considered to be carcinogenic. According to the classification criteria for mixtures.
Mutagenicity:	According to the available data on the components. Product is not considered to be genotoxic According to the classification criteria for mixtures.
Teratogenicity:	According to the available data on the components, the product is not considered to be toxic for development, the product is not considered to be teratogenic, According to the classification criteria for mixtures.
Target organs which may be affected:	None known



Sensitization: Not known to cause allergic reaction.

## **12. ECOLOGICAL INFORMATION**

Toxicity:  
Aquatic Compartment:  
Acute toxicity to fish: The product itself has not been tested.  
Acute toxicity to daphnia and other aquatic invertebrates: The product itself has not been tested.  
Toxicity to aquatic plants: The product itself has not been tested.  
Toxicity to microorganisms: The product itself has not been tested.  
Chronic toxicity to fish: The product itself has not been tested.  
Chronic toxicity to daphnia and other aquatic invertebrates: The product itself has not been tested.  
Chronic Toxicity to aquatic plants: No data available.  
Terrestrial Compartment:  
Toxicity to terrestrial plants: The product itself has not been tested.  
Toxicity to above ground organisms: The product itself has not been tested.  
Persistence and degradability  
Abiotic degradation: No data available.  
Physical- and photo-chemical elimination: No data available.  
Bio degradation: No data available.  
Degradability assessment: Conclusion is not possible due to incomplete or heterogeneous data on the components.  
Bio accumulative potential:  
Partition coefficient: n-octanol/water: No data available.  
Bio concentration factor (BCF): None of the components are considered to be potentially bio accumulative.  
Mobility in soil  
Adsorption potential (Koc): Conclusion is not possible due to incomplete or heterogeneous data on the components.  
Known distribution to environmental compartments: No data available.  
Results of PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.  
Other adverse effects:  
Ecotoxicity assessment:  
Acute aquatic toxicity: According to the available data on the components Toxic to aquatic life.  
According to the classification criteria for mixtures.  
Chronic aquatic toxicity: According to the available data on the components. Harmful to aquatic life with long lasting effects according to the classification criteria for mixtures.

## **13. DISPOSAL CONSIDERATIONS**

Product: Do not dispose of waste product into drains or watercourses. Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations.  
Container: Empty packaging. Rinse with an appropriate solvent. Dispose of rinse water in accordance with local and national regulations. Dispose of contents/ container to an approved waste disposal plant. Dispose of contents/container in accordance with local regulation. Where possible recycling is preferred to disposal or incineration. The recycled material must be completely dry and free of pollutants. In accordance

with RID/ADR regulations containers or tankers, which have not been cleaned or deodorized and which previously contained a hazardous product, must either be labelled or have hazard signs.

#### **14. TRANSPORT INFORMATION**

##### ADR

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Classification Code: F1  
Environmental hazards: NO  
Special precautions for user  
For personal protection see section 8.

##### RID

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Classification Code: F1  
Environmental hazards: NO  
Special precautions for user  
For personal protection see section 8.

##### IMDG

UN number UN: 1219  
Proper shipping name: ISOPROPANOL, solution  
IMDG Code segregation group: Not Relevant  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Environmental hazards  
Marine pollutant: NO  
Special precautions for user  
EmS: F-E, S-D  
For personal protection see section 8.  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
No data available

##### IATA

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Environmental hazards: NO  
Special precautions for user Packing 364

instruction (cargo aircraft):

Max net qty/pkg: 60.00 L

Packing instruction (passenger aircraft): 353

Max net qty/pkg: 5.00 L

For personal protection see section 8.

Note:

The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

## **15. REGULATORY INFORMATION**

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

Local regulations

No data available

Notification status

Inventory Information Status: Status

United States TSCA Inventory: Listed on Inventory.

Canadian Domestic Substances List (DSL): One or more components not listed on Inventory.

Australia Inventory of Chemical Substances (AICS): One or more components not listed on Inventory.

Japan. CSCL - Inventory of Existing and New Chemical Substances: Not in compliance with the inventory.

Korea. Korean Existing Chemicals Inventory (KECI): One or more components not listed on Inventory.

China. Inventory of Existing Chemical Substances in China (IECSC): One or more components not listed on Inventory.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): One or more components not listed on Inventory.

European Inventory of Existing Commercial Chemical Substances (EINECS): One or more components not listed on Inventory.

New Zealand. Inventory of Chemical Substances: One or more components not listed on Inventory.

Taiwan Chemical Substance Inventory: One or more components not listed on 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: **KMA007B**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

**High Temperature Viscoelastic Surfactant: KMA007B**

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

Flammable liquids, Category 2:

H225 - Highly flammable liquid and vapor.

Serious eye damage, Category 1:

H318 - Causes serious eye damage.

Specific target organ toxicity single exposure  
Category 3:

H336 - May cause drowsiness or dizziness. (Central nervous system)

Pictogram



Signal word:

Danger

Precautionary Statements:

General Prevention:

None

P210 - Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.

P233 - Keep container tightly closed.

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

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

Response:

P303 + P361 + P353 - IF ON SKIN (or hair) Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P312 - IF INHALED Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 + P310 - IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P370 + P378 - In case of fire Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc. [wt.%]	CAS #
Ammonium Quaternary Compound	30-40	-
Propanol	15-20	67-63-0
Water	35-40	7732-18-5

#### **4. FIRST AID MEASURES**

Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical advice/attention.
Skin contact:	Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. Use a mild soap if available. If skin irritation occurs, seek medical advice/attention.
Inhalation:	Move to fresh air in case of accidental inhalation of vapors. Keep at rest. Consult a physician if necessary. Consult a physician after significant exposure.
Swallowing:	Do not induce vomiting without medical advice. Rinse mouth with water. Keep at rest. Do not give anything to drink. Consult a physician if necessary.
Notes:	None

#### **5. FIRE-FIGHTING MEASURES**

Extinguishing media:	Multi-purpose powders, CO <sub>2</sub> , Foam, Water spray.
Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	Highly flammable liquid and vapor. Under fire conditions, highly flammable gas is released, which increases fire/explosion hazards. Fire or intense heat may cause violent rupture of packages. Flash back possible over considerable distance. Hazardous decomposition products formed under fire conditions. On heating highly toxic gases are released.
Special protective equipment:	Wear full protective clothing and self-contained breathing apparatus. Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.
Specific firefighting methods:	Stay upwind. Pay attention to flashback. Suppress (knock down) gases/vapors/mists with a water spray jet. Fight fire with normal precautions from a reasonable distance. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product. Remove undamaged containers from fire area if it is safe to do so.
Further information:	Evacuate personnel to safe areas. Intervention only by capable personnel who are trained and aware of the hazards of the product. Never approach containers which have been exposed to fire, without cooling them sufficiently. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Combustion products:	see Section 10.

#### **6. ACCIDENTAL RELEASE MEASURES**

After spillage/leakage:	
Prohibition:	No sparking tools should be used.
Methods for containment:	Stop leak if safe to do so. dam up with sand or inert earth (do not use combustible materials).
Recovery:	Absorb the product onto porous material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Use approved industrial vacuum cleaner for removal. Keep in suitable, closed containers for disposal.

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Decontamination/cleaning:	Wash with plenty of water and detergent. Clean contaminated surface thoroughly. Recover the cleaning water for subsequent disposal.
Disposal:	Dispose of as hazardous waste in compliance with local and national regulations.
Environmental precautions:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil.

See Section 8 for protective equipment information.

## **7. HANDLING AND STORAGE**

Special precautions:	Handle in accordance with good industrial hygiene and safety practice. The product must only be handled by specifically trained employees. Vapors are heavier than air and may spread along floors. Do not use in areas without adequate ventilation. Vapor extraction at source. Do NOT handle in a confined space. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Take precautionary measures against static discharges. Prevent the build-up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations. Ground/bond container and receiving equipment. Use only non-sparking tools. Wear clothes and shoes which dissipate static electricity. Wear personal protective equipment. Do NOT handle without gloves. Avoid inhalation, ingestion and contact with skin and eyes. Avoid splashes. Avoid formation of aerosol.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.
Storage:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in a bunded area. Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible materials to be indicated by the manufacturer. Keep locked up or in an area accessible only to qualified or authorized persons. Keep away from: Strong oxidizing agents.
Packaging requirements:	Stainless Steel or Coated metal container, not plastic materials.
Storage temperature:	0-35°C

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory protection:	In the case of vapor formation use a respirator with an approved filter. Recommended Filter type: Organic vapor type.
Eye protection:	Chemical splash goggles.
Hand protection:	Where there is a risk of contact with hands, use appropriate gloves. Gloves must be inspected prior to use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local

conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection:

Wear fire resistant and antistatic coveralls- Full protective suit- Antistatic boots.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.

Protective measures:

Emergency equipment immediately accessible, with instructions for use. Ensure that eyewash stations and safety showers are close to the workstation location. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use. The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment.

Environmental exposure controls:

Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil.

Engineering measures:

Effective exhaust ventilation system. Extract at emission point. Ensure that extracted air cannot be returned to the workplace through the ventilation system. Use only in an area equipped with explosion proof exhaust ventilation. Use only in an area equipped with flame proof exhaust ventilation. Avoid splashes. Avoid formation of aerosol.

Exposure Limit Guidelines (mg/m<sup>3</sup>):

Components with national occupational exposure limits:

Components	Value Type	Value	Basis
Propan-2-ol	PEL (long-term)	400 ppm 983 mg/m <sup>3</sup>	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances.
Propan-2-ol	PEL (short term)	500 ppm 1,230 mg/m <sup>3</sup>	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances.

Components with other occupational exposure limits

Components	Value Type	Value	Basis
Propan-2-ol	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV).
Propan-2-ol	STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV).

Biological Exposure Indices

Components	Value Type	Value	Basis
Propan-2-ol	BEI	40 mg/l Acetone Urine End of shift at end of workweek.	ACGIH - Biological Exposure Indices (BEI).

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form:	Liquid
Color:	Amber-yellow
Odor:	Faint
pH value:	7.0-8.0 (1.0 vol.% aqueous alcohol solution.)
Boiling point/Boiling range:	80°C (data based on similar products.)
Pour point:	0°C
Flash point:	20°C closed up (data based on similar products.)
Flammability (explosion limits in air):	
Lower:	Not available
Upper:	Not available
Auto flammability (auto-ignition temperature):	Not available
Vapor pressure:	Not available
Relative density (specific gravity):	1.00-1.05
Viscosity:	Not available
Solubility in water:	Miscible
Oxidizing properties	Not considered as oxidizing, structure-activity relationship (SAR).

## **10. STABILITY AND REACTIVITY**

Chemical Stability:	Stable under recommended storage conditions.
Reactivity	Stable at normal ambient temperature and pressure.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition. Direct sources of heat.
Materials to avoid:	Strong Oxidizers
Possibility of Hazardous Reactions:	possible with gas/vapor and air mixtures above flash point.
Special hazards:	None
Hazardous decomposition products:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke), Nitrogen oxides (NO <sub>x</sub> ), Sulphur oxides.

## **11. TOXICOLOGICAL INFORMATION**

Eye contact:	Risk of serious damage to eyes. According to the available data on the components. According to the classification criteria for mixtures.
Skin contact:	Not classified as irritating to skin. According to the available data on the components. According to the classification criteria for mixtures.
Inhalation:	Does not cause respiratory sensitization. According to the available data on the components. According to the classification criteria for mixtures.
Carcinogenicity:	According to the available data on the components. The product is not considered to be carcinogenic. According to the classification criteria for mixtures.
Mutagenicity:	According to the available data on the components. Product is not considered to be genotoxic According to the classification criteria for mixtures.
Teratogenicity:	According to the available data on the components, the product is not considered to be toxic for development, the product is not considered to be teratogenic, According to the classification criteria for mixtures.
Target organs which may be affected:	None known.
Sensitization:	Not known to cause allergic reaction.



## **12. ECOLOGICAL INFORMATION**

Toxicity:	
Aquatic Compartment:	
Acute toxicity to fish:	The product itself has not been tested.
Acute toxicity to daphnia and other aquatic invertebrates:	The product itself has not been tested.
Toxicity to aquatic plants:	The product itself has not been tested.
Toxicity to microorganisms:	The product itself has not been tested.
Chronic toxicity to fish:	The product itself has not been tested.
Chronic toxicity to daphnia and other aquatic invertebrates:	The product itself has not been tested.
Chronic Toxicity to aquatic plants:	No data available.
Terrestrial Compartment:	
Toxicity to terrestrial plants:	The product itself has not been tested.
Toxicity to above ground organisms:	The product itself has not been tested.
Persistence and degradability	
Abiotic degradation:	No data available.
Physical- and photo-chemical elimination:	No data available.
Bio degradation:	No data available.
Degradability assessment:	Conclusion is not possible due to incomplete or heterogeneous data on the components.
Bio accumulative potential:	
Partition coefficient: n-octanol/water:	No data available.
Bio concentration factor (BCF):	None of the components are considered to be potentially bio accumulative.
Mobility in soil	
Adsorption potential (Koc):	Conclusion is not possible due to incomplete or heterogeneous data on the components.
Known distribution to environmental compartments:	No data available.
Results of PBT and vPvB assessment:	This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects:	
Ecotoxicity assessment:	
Acute aquatic toxicity:	According to the available data on the components Toxic to aquatic life. According to the classification criteria for mixtures
Chronic aquatic toxicity:	According to the available data on the components. Harmful to aquatic life with long lasting effects according to the classification criteria for mixtures.

## **13. DISPOSAL CONSIDERATIONS**

Product:	Do not dispose of waste product into drains or watercourses. Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations.
Container:	Empty packaging. Rinse with an appropriate solvent. Dispose of rinse water in accordance with local and national regulations. Dispose of contents/ container to an approved waste disposal plant. Dispose of contents/container in accordance with local regulation. Where possible recycling is preferred to disposal or incineration. The recycled material must be completely dry and free of pollutants. In accordance with RID/ADR regulations containers or tankers, which have not been cleaned or deodorized and which previously contained a hazardous product, must either be labelled or

have hazard signs.

#### **14. TRANSPORT INFORMATION**

##### ADR

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Classification Code: F1  
Environmental hazards: NO  
Special precautions for user  
For personal protection see section 8.

##### RID

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Classification Code: F1  
Environmental hazards: NO  
Special precautions for user  
For personal protection see section 8.

##### IMDG

UN number UN: 1219  
Proper shipping name: ISOPROPANOL, solution  
IMDG Code segregation group: Not Relevant  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Environmental hazards  
Marine pollutant: NO  
Special precautions for user  
EmS: F-E, S-D  
For personal protection see section 8.  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
No data available

##### IATA

UN number: UN 1219  
Proper shipping name: ISOPROPANOL, solution  
Transport hazard class: 3  
Label(s): 3  
Packing group: II  
Environmental hazards: NO  
Special precautions for user Packing instruction (cargo aircraft): 364  
Max net qty/pkg: 60.00 L  
Packing instruction (passenger aircraft): 353

Max net qty/pkg: 5.00 L

For personal protection see section 8.

Note:

The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

## **15. REGULATORY INFORMATION**

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

Local regulations

No data available

Notification status

Inventory Information Status:

Status

United States TSCA Inventory:

Listed on Inventory.

Canadian Domestic Substances List (DSL):

One or more components not listed on Inventory.

Australia Inventory of Chemical Substances (AICS):

One or more components not listed on Inventory.

Japan. CSCL - Inventory of Existing and New Chemical Substances:

Not in compliance with the inventory.

Korea. Korean Existing Chemicals Inventory (KECI):

One or more components not listed on Inventory.

China. Inventory of Existing Chemical Substances in China (IECSC):

One or more components not listed on Inventory.

Philippines Inventory of Chemicals and Chemical Substances (PICCS):

One or more components not listed on Inventory.

European Inventory of Existing Commercial Chemical Substances (EINECS):

One or more components not listed on Inventory.

New Zealand. Inventory of Chemical Substances:

One or more components not listed on Inventory.

Taiwan Chemical Substance Inventory:

One or more components not listed on 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: **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:

**H<sub>2</sub>S 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, CO<sub>2</sub>, 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 <sup>3</sup> ):	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**

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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:

**H<sub>2</sub>S Scavenger Aid: KMA009B**

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.

Dammam 2<sup>nd</sup> Industrial City, 6<sup>th</sup> 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



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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/m<sup>3</sup>):

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 2<sup>nd</sup> Industrial City, 6<sup>th</sup> 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**

<b>Substance</b>	<b>Conc. [wt.%]</b>	<b>CAS #</b>
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, CO<sub>2</sub>.

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 <sup>3</sup> ):	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**

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\*\*\* 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 2<sup>nd</sup> Industrial City, 6<sup>th</sup> 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**

<b>Substance</b>	<b>Conc. [wt.%]</b>	<b>CAS #</b>
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**

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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 <sup>3</sup> ):	No components have established exposure limits.
Dust particles:	total = 10 mg/m <sup>3</sup> , respirable fraction = 5 mg/m <sup>3</sup> .

## **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 <sup>3</sup>
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: **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 2<sup>nd</sup> Industrial City, 6<sup>th</sup> 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, CO<sub>2</sub>

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 <sup>3</sup> ):	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:**

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: **KMA034A**

Effective Date: December-2023

Version: 3.0

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

Identification of the substance or preparation:

**Corrosion Inhibitor: KMA034A**

Company/undertaking identification:

OPT Chemicals Saudi Factory and Co.  
Dammam 2<sup>nd</sup> Industrial City, 6<sup>th</sup> 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:

Flammable liquids, Category 4:

H227 - Combustible liquid.

Acute Toxicity, Category 4:

H302 - Harmful if swallowed

Acute Toxicity, Category 5:

H333 - May be harmful if inhaled

Skin corrosion, Category 1A:

H314 - Causes severe skin burns and eye damage.

Serious eye damage, Category 1:

H318 - Causes serious eye damage.

Specific target organ toxicity –single exposure  
Category 3:

H335 - May cause respiratory irritation. (Respiratory system)

Specific target organ toxicity –single exposure  
Category 2:May cause damage to organs through prolonged or repeated  
exposure if swallowed. (Kidney, Oral system)

GHS Classification and Labeling:

Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29  
(GHS 2011)Hazardous products which must be listed on  
the label:Ammonium Quaternary Compound  
Solvent  
Aryl based aldehyde  
Ethylene glycol

Hazard Pictograms:



Signal Word:

Danger

Hazard Statements:

General:

None

Prevention:

P210-Keep away from heat/sparks/open flames/hot surfaces.  
No smoking  
P260-Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P264-Wash skin thoroughly after handling.  
P270-Do not eat, drink or smoke when using this product.  
P271-Use only outdoors or in a well-ventilated area  
P272-Contaminated work clothing should not be allowed out of  
the workplace.  
P273-Avoid release to the environment.

Response:

P280-Wear protective gloves/ eye protection/ face protection.  
P301 + P312 + P330 - IF SWALLOWED: Call a POISON  
CENTER/doctor if you feel unwell. Rinse mouth.  
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do  
NOT induce vomiting.  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off  
immediately all contaminated clothing. Rinse skin with  
water/shower.

Storage:	<p>P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER / doctor.</p> <p>P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER / doctor.</p> <p>P314 - Get medical advice/ attention if you feel unwell.</p> <p>P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362 + P364 - Take off contaminated clothing and wash it before reuse.</p> <p>P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.</p> <p>P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.</p> <p>P403 + P235 - Store in a well-ventilated place. Keep cool.</p> <p>P391 - Collect spillage.</p>
Disposal:	<p>P501 - Dispose of contents/ container to an approved waste disposal plant.</p>

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Substance</b>	<b>Conc. [wt.%]</b>	<b>CAS #</b>
Ammonium Quaternary Compound	30-40	Proprietary
Solvent	10-20	-
Aldehyde	10-20	Proprietary
Ethylene Glycol	10-20	107-21-1

### **4. FIRST AID MEASURES**

Eye contact:	Rinse with running water whilst keeping the eyes wide open (at least 15 minutes). Get immediate medical advice/ attention.
Skin contact:	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation:	Move to fresh air. Keep at rest. Consult a physician if necessary. Consult a physician after significant exposure.
Swallowing:	Do NOT induce vomiting. Do not give anything to drink. Keep at rest. Consult a physician if necessary. If a large amount is swallowed, get medical attention.
Note:	Show this safety data sheet to the doctor in attendance. First aider needs to protect himself. Place affected clothing in a sealed bag for subsequent decontamination.

### **5. FIRE-FIGHTING MEASURES**

Extinguishing media:	Powder, CO <sub>2</sub> , Foam, Water spray.
Unsuitable extinguishing media:	Do not use high volume water stream.
Specific hazards during firefighting:	Combustible. However, does not present any particular risk in the event of a fire. Hazardous decomposition products formed under fire conditions.
Special protective equipment:	Wear full protective clothing and self-contained breathing apparatus. Personal protective equipment comprising suitable protective gloves, safety goggles and protective clothing.
Specific firefighting methods:	Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product. Do not use a solid water stream as

Further Information:

it may scatter and spread fire.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Combustion products:

See Section 10.

## **6. ACCIDENTAL RELEASE MEASURES**

After spillage/leakage:

Methods for containment:

Recovery:

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Pump up the product into a spare container: - suitably labelled. Keep in suitable, closed containers for disposal.

Decontamination/cleaning:

Wash off with plenty of water. Recover the cleaning water for subsequent disposal.

Disposal:

Dispose of in accordance with local regulations.

Environmental precautions:

Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil. Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

See Section 8 for protective equipment information.

## **7. HANDLING AND STORAGE**

Special precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Do NOT handle in a confined space. Avoid inhalation, ingestion and contact with skin and eyes. Avoid splashes. Avoid formation of aerosol. Do NOT handle without gloves. Do NOT handle if hands have any cuts or wounds.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.

Storage:

Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Store in original container. Keep in a bunded area. The floor of the storage area should be impermeable and designed to form a water-tight basin. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources

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Packaging requirements:	of ignition. Keep away from incompatible materials to be indicated by the manufacturer Prevent unauthorized access. Keep away from: Do not mix with incompatible materials (See list section 10)., Strong oxidizing agents, Strong reducing agents., Strong bases.
Storage temperature:	Coated steels. Steel drums with an inner lining. 4-40°C

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory protection:	Use a respirator with an approved filter if a risk assessment indicates this is necessary. Use respirator when performing operations involving potential exposure to vapor of the product. Recommended filter type: Combined acidic and inorganic gas/vapor type.
Eye protection:	Tightly fitting safety goggles - Face-shield.
Hand protection:	Where there is a risk of contact with hands, use appropriate gloves. Gloves must be inspected prior to use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Suitable material: Impervious gloves.
Skin and body protection:	Full protective suit Footwear protecting against chemicals Choose body protection according to the amount and concentration of the dangerous substance at the work place. Remove and wash contaminated clothing before re-use.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Use clean, well-maintained personal protection equipment. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. The user is responsible for monitoring the working environment in accordance with local laws and regulations.
Protective measures:	Emergency equipment immediately accessible, with instructions for use. Ensure that eyewash stations and safety showers are close to the workstation location. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use. The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment.
Environmental exposure controls:	Contain the spilled material by bunding. The product should not be allowed to enter drains, water courses or the soil. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.
Engineering measures:	Effective exhaust ventilation system. Extract at emission point. Ensure that extracted air cannot be returned to the workplace



through the ventilation system. Avoid splashes. Avoid formation of aerosol.

Exposure Limit Guidelines (mg/m<sup>3</sup>).

Components with national occupational exposure limits.

Components	Value Type	Value	Basis
Solvent	PC-TWA	10 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
Solvent	PC-STEL	20 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
Ethylene glycol	PC-TWA	20 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
Ethylene glycol	PC-STEL	20 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

Components with other occupational exposure limits.

Components	Value Type	Value	Basis
Solvent	TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
Solvent	STEL	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
Ethylene glycol	C	100 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form:	Liquid
Color:	Dark brown
Odor:	N/A
pH value:	2.0-3.0 (1.0 vol.% water solution)
Boiling point/Boiling range:	68°C (data based on similar products)
Melting point/freezing point:	Not available
Flash point:	> 85°C (Pensky-Martens closed up, Method: ASTM D 93)
Flammability (explosion limits in air):	
Lower:	Not available
Upper:	Not available
Auto flammability (auto-ignition temperature):	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Density:	1.15-1.20
Viscosity:	6-10 mPa•s (25°C)
Solubility in water:	Miscible, 80-120 g/L
Oxidizing properties:	No data available

## **10. STABILITY AND REACTIVITY**

Chemical Stability:	Stable at room temperature
Reactivity:	Stable at normal ambient temperature and pressure.
Conditions to avoid:	Avoid excessive heat for prolonged periods of time. Keep away from open flames, hot surfaces and sources of ignition.
Materials to avoid:	Strong Oxidizers, strong reducing agents, strong bases.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Special hazards:	None
Hazardous decomposition products:	On combustion or on thermal decomposition (pyrolysis) releases: Nitrogen oxides (NO <sub>x</sub> ) Hydrogen chloride (Carbon oxides (CO + CO <sub>2</sub> )).

## **11. TOXICOLOGICAL INFORMATION**

Eye contact:	Risk of serious damage to eyes.
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Skin contact:	According to the available data on the components. According to the classification criteria for mixtures. Not classified as irritating to skin.
Inhalation Aryl based aldehyde:	According to the available data on the components. According to the classification criteria for mixtures. Maximization Test – Guinea pig.
Carcinogenicity:	According to the classification criteria for mixtures. According to the available data on the components. The product is not considered to be carcinogenic.
Mutagenicity:	According to the classification criteria for mixtures. According to the available data on the components. Product is not considered to be genotoxic
Teratogenicity:	According to the classification criteria for mixtures. According to the available data on the components. The product is not considered to be toxic for development. The product is not considered to be teratogenic.
Target organs which may be affected:	According to the classification criteria for mixtures. None known
Other:	No data available

## **12. ECOLOGICAL INFORMATION**

Toxicity:	
Aquatic Compartment	
Acute toxicity to fish:	The product itself has not been tested.
Acute toxicity to daphnia and other aquatic invertebrates:	The product itself has not been tested.
Toxicity to aquatic plants:	The product itself has not been tested.
Toxicity to microorganisms:	The product itself has not been tested.
Chronic toxicity to fish:	No data available
Chronic toxicity to daphnia and other aquatic invertebrates:	No data available
Chronic Toxicity to aquatic plants:	No data available
Persistence and degradability:	
Abiotic degradation:	No data available
Physical- and photo-chemical elimination:	No data available
Biodegradation:	No data available
Degradability assessment:	Conclusion is not possible due to incomplete or heterogeneous data on the components.
Bio accumulative potential:	
Partition coefficient: n-octanol/water:	No data available
Bioconcentration factor (BCF):	Conclusion is not possible due to incomplete or heterogeneous data on the components.
Mobility in soil:	
Adsorption potential (Koc):	Conclusion is not possible due to incomplete or heterogeneous data on the components.
Known distribution to environmental compartments:	No data available.
Results of PBT and vPvB assessment:	This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects:	

Ecotoxicity assessment:

Acute aquatic toxicity:

According to the available data on the components Toxic to aquatic life.

Chronic aquatic toxicity:

According to the available data on the components. harmful to aquatic life with long lasting effects. According to the classification criteria for mixtures.

### **13. DISPOSAL CONSIDERATIONS**

Product:

Do not dispose of waste product into drains or watercourses. Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations.

Container:

Completely empty the packaging prior to decontamination. De-gas. Carefully drain and then steam clean. Do not enter tanks or containers before they have been cleaned and de-gassed. Recycle following cleaning. Dispose of contents/container to an approved waste disposal plant. In accordance with RID/ADR regulations containers or tankers, which have not been cleaned or deodorized and which previously contained a hazardous product, must either be labelled or have hazard signs. Dispose of in accordance with local regulations.

### **14. TRANSPORT INFORMATION**

CN DG:

UN Number:

UN 2735

UN Proper Shipping Name:

AMINES, LIQUID, CORROSIVE, N.O.S. (Ammonium Quaternary Compound, Solvent)

Transport Hazard Class:

8

Label(s):

8

Package Group:

I

Environmental Hazard:

YES

Special precautions for user:

For personal protection see section 8.

ADR:

UN Number:

UN 2735

UN Proper Shipping Name:

AMINES, LIQUID, CORROSIVE, N.O.S. (Ammonium Quaternary Compound, Solvent)

Transport Hazard Class:

8

Label(s):

8

Package Group:

I

Environmental Hazard:

NO

Special precautions for user:

For personal protection see section 8.

RID:

UN Number:

UN 2735

UN Proper Shipping Name:

AMINES, LIQUID, CORROSIVE, N.O.S. (Ammonium Quaternary Compound, Solvent)

Transport Hazard Class:

8

Label(s):

8

Package Group:

I

Environmental Hazard:

NO

Special precautions for user:

For personal protection see section 8.

IMDG:

UN Number:	UN 2735
UN Proper Shipping Name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Ammonium Quaternary Compound, Solvent)
Transport Hazard Class:	8
Label(s):	8
Package Group:	I
Environmental Hazard:	YES
Special precautions for user:	
EMS:	F-A, S-B
For personal protection see section 8.	

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No data available.

**IATA:**

UN Number:	UN 2735
UN Proper Shipping Name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Ammonium Quaternary Compound, Solvent) .
Transport Hazard Class:	8
Label(s):	8
Package Group:	I
Environmental Hazard:	YES
Special precautions for user:	
Packing instruction (cargo aircraft):	854
Max net qty/pkg:	2.50 L
For personal protection see section 8.	

**Note:** The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

## **15. REGULATORY INFORMATION**

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

Following last version of regulations are applicable for the chemical classification, SDS and label:

General Rule for classification and hazard communication of chemicals, GB 13690 Series standards of Safety rules for classification, precautionary labeling and precautionary statements of chemicals, GB 30000.2~GB 30000.29 General rules for preparation of precautionary label for chemicals, GB 15258 Safety data sheet for chemical products—Content and order of sections, GB/T 16483 Decree No. 591 of the State Council of the People's Republic of China: Regulations on the Control over Safety of Hazardous Chemicals List of dangerous goods GB12268 Classification and code of dangerous goods GB6944.

Other regulations:	Law on the Prevention and Control of Occupational Diseases.
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**Notification status.**

Inventory Information Status:	Status
United States TSCA Inventory:	Listed on Inventory
Canadian Domestic Substances List (DSL):	One or more components not listed on inventory
Australia Inventory of Chemical Substances (AICS):	One or more components not listed on inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances:	Not in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI):	One or more components not listed on inventory
China. Inventory of Existing Chemical Substances in China (IECSC):	One or more components not listed on inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	One or more components not listed on inventory
European Inventory of Existing Commercial Chemical Substances (EINECS):	One or more components not listed on inventory
New Zealand. Inventory of Chemical Substances:	One or more components not listed on inventory
Taiwan Chemical Substance Inventory:	One or more components not listed on inventory

## **16. OTHER INFORMATION**



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\*\*\* END OF SDS\*\*\*