GEORGIA WAREHOUSE 3939 Royal Drive, Suite 139, Kennesaw, GA, 30144 MICHIGAN WAREHOUSE 25991 Northline Commerce Dr. Unit 504 Taylor, MI 48180 UTAH WAREHOUSE 647 West Billinis Road, Unit 1 Salt Lake City, Utah 84119

# **MATERIAL SAFETY DATA SHEET**

**FILE NO.:** AS-K25621-KW

NAME OF PRODUCT: KS144-CH2-dK4 Calcium Hardness Buffer Reviewed on: Sept 23 2011

### **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: dK1 Isothiazoline Test Reagent

SYNONYMS:

**PRODUCT CODES:** 

CHEMICAL NAME: CHEMICAL FAMILY:

CHEMICAL FORMULA: PRODUCT USE: Analytical Reagent

**SECTION 1 NOTES:** 

#### **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT CAS NO. % Composition SARA 313 REPORTABLE

Sodium Hydroxide 1310-73-2 13.793%

**SECTION 2 NOTES:** 

## **SECTION 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** 

ROUTES OF ENTRY: Eyes, ingestion and contact hazard

**POTENTIAL HEALTH EFFECTS:** 

EYES: May cause irritation.

SKIN: May cause irritation to broken or compromised skin.

INGESTION: May cause esophageal burning and irritation and gastrointestinal problems.

INHALATION: Not considered an inhalation hazard.

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Previously irritated or damaged skin.

CARCINOGENICITY: This product is not expected to be carcinogenic.

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: KS144-CH2-dK4 Calcium Hardness Buffer Reviewed on: Sept 23 2011

#### **SECTION 4: FIRST AID MEASURES**

EYES: Seek medical aid. Gently lift eyelids and flush continuously with cold water for 15 minutes.

**SKIN:** Generally the product does not irritate skin

**INGESTION:** Seek medical aid. Do not induce vomiting unless instructed by medical professional. If victim is conscious and alert, give 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION:** (General) Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** 

#### **SECTION 5: FIRE-FIGHTING MEASURES**

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable

FLASH POINT: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:

OTHER:

EXTINGUISHING MEDIA: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

SECTION 5 NOTES:

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Wear protective equipment. Keep unprotected persons away.

ENVIRONMENTAL PRECAUTIONS: Dilute with plenty of water. Do not allow to enter sewers, surface, or ground water.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP: Pick up mechanically.

**SECTION 6 NOTES:** 

## **SECTION 7: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING: No special measures required.

INFORMATION ABOUT FIRE AND EXPLOSION PROTECTION: No special measured required.

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: No special requirements.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Not required.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: Keep container tightly sealed.

SPECIFIC END USE(S): No further relevant information available.

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: KS144-CH2-dK4 Calcium Hardness Buffer Reviewed on: Sept 23 2011

**OTHER PRECAUTIONS:** 

**SECTION 7 NOTES:** 

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**RESPIRATORY PROTECTION:** Not required.

**EYE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure. The glove material has to be impermeable and resistant to the product, substance, preparation, or chemical mixture. Selection of the glove material is based on penetration times, rates of diffusion, and the degradation of the glove material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate protective clothing to prevent skin exposure.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR**: Not determined

**ODOR:** Characteristic

PHYSICAL STATE: Liquid

pH AS SUPPLIED: N/A

**BOILING POINT: N/A** 

MELTING POINT: N/A

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): N/A

**EVAPORATION RATE: N/A** 

FLAMMABILITY: Not flammable

**SOLUBILITY IN WATER:** Soluble

PERCENT SOLIDS BY WEIGHT: ~14%

**PERCENT VOLATILE:** None

MOLECULAR WEIGHT: Mixture

**FILE NO.:** AS-K25654-KW

NAME OF PRODUCT: KS144-CH2-dK4 Calcium Hardness Buffer Reviewed on: Sept 23 2011

STABILITY: This product is expected to be stable under normal conditions of storage and use.

CONDITIONS TO AVOID (STABILITY): No further relevant information is available.

INCOMPATIBILITY (MATERIAL TO AVOID): No further relevant information is available.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No dangerous decomposition products are known.

HAZARDOUS POLYMERIZATION: No further relevant information is available.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL INFORMATION:** When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**SECTION 11 NOTES:** 

### **SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION**: No further relevant information available.

**GENERAL NOTES:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewer system

**SECTION 12 NOTES:** 

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

### WASTE DISPOSAL METHOD:

RECOMMENDATION: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### **UNCLEANED PACKAGING:**

**RECOMMENDATION:** Disposal must be made according to official regulations.

RECOMMENDED CLEANSING AGENTS: Water, if necessary together with cleansing agents

**SECTION 13 NOTES:** 

#### **SECTION 14: TRANSPORT INFORMATION**

### **U.S. DEPARTMENT OF TRANSPORTATION**

PROPER SHIPPING NAME:

ADR: 1824 SODIUM HYDROXIDE SOLUTION, mixture IMDG, IATA: SODIUM HYDROXIDE SOLUTION, mixture

**HAZARD CLASS:** 8 Corrosive substances

ID NUMBER: UN1824 PACKING GROUP: ADR, IMDG, IATA: II LABEL STATEMENT:

#### WATER TRANSPORTATION

PROPER SHIPPING NAME: SODIUM HYDROXIDE SOLUTION

HAZARD CLASS: 8
ID NUMBER: UN1824
PACKING GROUP: II
LABEL STATEMENTS:

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: KS144-CH2-dK4 Calcium Hardness Buffer Reviewed on: Sept 23 2011

**AIR TRANSPORTATION** 

PROPER SHIPPING NAME: SODIUM HYDROXIDE SOLUTION

HAZARD CLASS: 8
ID NUMBER: UN1824
PACKING GROUP: II
LABEL STATEMENTS:

Special precautions for user: Warning: corrosive substances

Danger code (Kemler): 80 EMS Number: F-A, S-B Segregation groups: Alkalis

Tunnel restriction code: E

UN "Model Regulation": UN1824, sodium hydroxide solution, mixture, 8, II

**OTHER AGENCIES:** 

**SECTION 14 NOTES:** 

### **SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS** 

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not listed

311/312 HAZARD CATEGORIES: None
313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS: None

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: dK1 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

### **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: dK1 Isothiazoline Test Reagent

SYNONYMS: PRODUCT CODES:

CHEMICAL NAME: CHEMICAL FAMILY:

CHEMICAL FORMULA: PRODUCT USE: Analytical Reagent

SECTION 1 NOTES:

## **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT	CAS NO.	% Composition	SARA 313 REPORTABLE
Deionized Water	7732-18-5	99-100%	
Sodium Hydroxide	1310-73-2	0.01%	

## **SECTION 2 NOTES:**

### **SECTION 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** 

ROUTES OF ENTRY: Eyes, ingestion and contact hazard

**POTENTIAL HEALTH EFFECTS:** 

**EYES:** May cause irritation.

**SKIN:** May cause irritation to broken or compromised skin.

INGESTION: May cause esophageal burning and irritation and gastrointestinal problems.

INHALATION: Not considered an inhalation hazard.

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Previously irritated or damaged skin.

CARCINOGENICITY: This product is not expected to be carcinogenic.

FILE NO .: AS-K25654-KW

NAME OF PRODUCT: dK1 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

#### **SECTION 4: FIRST AID MEASURES**

EYES: Seek medical aid. Gently lift eyelids and flush continuously with cold water for 15 minutes.

**SKIN:** Generally the product does not irritate skin

**INGESTION:** Seek medical aid. Do not induce vomiting unless instructed by medical professional. If victim is conscious and alert, give 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION: (General)** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** 

#### **SECTION 5: FIRE-FIGHTING MEASURES**

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable

FLASH POINT: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:

OTHER:

EXTINGUISHING MEDIA: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

**SECTION 5 NOTES:** 

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Dilute area with water, absorb onto inert material and dispose of in an approved waste container for disposal

ENVIRONMENTAL PRECAUTIONS: Do not allow to enter sewers, surface, or ground water.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP: Pick up mechanically.

**SECTION 6 NOTES:** 

## **SECTION 7: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING: No special measures required.

INFORMATION ABOUT FIRE AND EXPLOSION PROTECTION: No special measured required.

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: No special requirements.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Not required.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: None.

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: dK1 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

SPECIFIC END USE(S): No further relevant information available.

OTHER PRECAUTIONS:

**SECTION 7 NOTES:** 

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**RESPIRATORY PROTECTION:** Not required.

**EYE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure. The glove material has to be impermeable and resistant to the product, substance, preparation, or chemical mixture. Selection of the glove material is based on penetration times, rates of diffusion, and the degradation of the glove material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate protective clothing to prevent skin exposure.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**COLOR**: Not determined

**ODOR:** Characteristic

PHYSICAL STATE: Liquid

pH AS SUPPLIED: N/A

**BOILING POINT:** N/A

**MELTING POINT:** N/A

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): N/A

**EVAPORATION RATE: N/A** 

**FLAMMABILITY:** Not flammable

**SOLUBILITY IN WATER: Soluble** 

**PERCENT SOLIDS BY WEIGHT: <1%** 

**PERCENT VOLATILE: None** 

MOLECULAR WEIGHT: Mixture

FILE NO.: AS-K25654-KW

NAME OF PRODUCT: dK1 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

#### **SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** This product is expected to be stable under normal conditions of storage and use.

CONDITIONS TO AVOID (STABILITY): No further relevant information is available.

INCOMPATIBILITY (MATERIAL TO AVOID): No further relevant information is available.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No dangerous decomposition products are known.

**HAZARDOUS POLYMERIZATION:** No further relevant information is available.

#### SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION:** When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**SECTION 11 NOTES:** 

#### **SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION**: No further relevant information available.

**GENERAL NOTES:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewer system

**SECTION 12 NOTES:** 

### **SECTION 13: DISPOSAL CONSIDERATIONS**

### WASTE DISPOSAL METHOD:

**RECOMMENDATION**: Smaller quantities can be disposed of with household waste.

## **UNCLEANED PACKAGING:**

**RECOMMENDATION:** Disposal must be made according to official regulations.

**SECTION 13 NOTES:** 

#### **SECTION 14: TRANSPORT INFORMATION**

### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: HAZARD CLASS: VOID ID NUMBER: VOID PACKING GROUP: VOID LABEL STATEMENT:

#### WATER TRANSPORTATION

PROPER SHIPPING NAME: HAZARD CLASS: VOID ID NUMBER: VOID PACKING GROUP: VOID LABEL STATEMENTS:

# **AIR TRANSPORTATION**

PROPER SHIPPING NAME: HAZARD CLASS: VOID

**FILE NO.:** AS-K25654-KW

NAME OF PRODUCT: dK1 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

ID NUMBER: VOID PACKING GROUP: VOID LABEL STATEMENTS:

**OTHER AGENCIES:** 

**SECTION 14 NOTES:** 

# **SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS** 

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not listed

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS: None

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK2 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

### **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: dK2 Isothiazoline Test Reagent

SYNONYMS: PRODUCT CODES:

EMERGENCY PHONE: Chemtrec: 703.527.3887 (International), 800.426.9300 (Toll Free)

OTHER CALLS:

CHEMICAL NAME: CHEMICAL FAMILY:

CHEMICAL FORMULA: PRODUCT USE: Analytical Reagent

**SECTION 1 NOTES:** 

## **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT CAS NO. % Composition SARA 313 REPORTABLE

Ammonium Heptamolybdate 12054-85-2 2.263%

**SECTION 2 NOTES:** 

#### **SECTION 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** 

ROUTES OF ENTRY: Eyes, ingestion and contact hazard

**POTENTIAL HEALTH EFFECTS:** 

**EYES:** May cause irritation.

SKIN: May cause irritation to broken or compromised skin.

**INGESTION**: May cause esophageal burning and irritation and gastrointestinal problems.

INHALATION: Not considered an inhalation hazard.

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Previously irritated or damaged skin.

CARCINOGENICITY: This product is not expected to be carcinogenic.

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK2 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

EYES: Seek medical aid. Gently lift eyelids and flush continuously with cold water for 15 minutes.

SKIN: Generally the product does not irritate skin

**INGESTION:** Seek medical aid. Do not induce vomiting unless instructed by medical professional. If victim is conscious and alert, give 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION:** (General) Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

#### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** 

### **SECTION 5: FIRE-FIGHTING MEASURES**

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable

FLASH POINT: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:

OTHER:

EXTINGUISHING MEDIA: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

**SECTION 5 NOTES:** 

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Dilute area with water, absorb onto inert material and dispose of in an approved waste container for disposal

ENVIRONMENTAL PRECAUTIONS: Do not allow to enter sewers, surface, or ground water.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP: Pick up mechanically.

**SECTION 6 NOTES:** 

## **SECTION 7: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING: No special measures required.

INFORMATION ABOUT FIRE AND EXPLOSION PROTECTION: No special measured required.

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: No special requirements.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Not required.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: None.

**SPECIFIC END USE(S):** No further relevant information available.

OTHER PRECAUTIONS:

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK2 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

**SECTION 7 NOTES:** 

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**RESPIRATORY PROTECTION:** Not required.

**EYE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure. The glove material has to be impermeable and resistant to the product, substance, preparation, or chemical mixture. Selection of the glove material is based on penetration times, rates of diffusion, and the degradation of the glove material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate protective clothing to prevent skin exposure.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR**: Not determined

**ODOR:** Characteristic

PHYSICAL STATE: Liquid

pH AS SUPPLIED: N/A

**BOILING POINT: N/A** 

**MELTING POINT: N/A** 

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): N/A

**EVAPORATION RATE:** N/A

**FLAMMABILITY:** Not flammable

**SOLUBILITY IN WATER:** Soluble

PERCENT SOLIDS BY WEIGHT: <3%

**PERCENT VOLATILE: None** 

MOLECULAR WEIGHT: Mixture

**SECTION 9 NOTES:** 

## **SECTION 10: STABILITY AND REACTIVITY**

STABILITY: This product is expected to be stable under normal conditions of storage and use.

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK2 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

CONDITIONS TO AVOID (STABILITY): No further relevant information is available.

INCOMPATIBILITY (MATERIAL TO AVOID): No further relevant information is available.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No dangerous decomposition products are known.

HAZARDOUS POLYMERIZATION: No further relevant information is available.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL INFORMATION:** When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**SECTION 11 NOTES:** 

#### **SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION**: No further relevant information available.

**GENERAL NOTES:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewer system

**SECTION 12 NOTES:** 

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### **WASTE DISPOSAL METHOD:**

**RECOMMENDATION**: Smaller quantities can be disposed of with household waste.

#### **UNCLEANED PACKAGING:**

**RECOMMENDATION:** Disposal must be made according to official regulations.

**SECTION 13 NOTES:** 

### **SECTION 14: TRANSPORT INFORMATION**

### **U.S. DEPARTMENT OF TRANSPORTATION**

PROPER SHIPPING NAME: HAZARD CLASS: VOID ID NUMBER: VOID PACKING GROUP: VOID LABEL STATEMENT:

# WATER TRANSPORTATION

PROPER SHIPPING NAME:
HAZARD CLASS: VOID
ID NUMBER: VOID
PACKING GROUP: VOID
LABEL STATEMENTS:

#### AIR TRANSPORTATION

PROPER SHIPPING NAME:
HAZARD CLASS: VOID
ID NUMBER: VOID
PACKING GROUP: VOID
LABEL STATEMENTS:

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK2 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

**OTHER AGENCIES:** 

**SECTION 14 NOTES:** 

# **SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS** 

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not listed

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

**STATE REGULATIONS: None** 

**FILE NO.:** AS-K28673-KW

NAME OF PRODUCT: dK3 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

### **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: dK3 Isothiazoline Test Reagent

SYNONYMS: PRODUCT CODES:

CHEMICAL NAME: CHEMICAL FAMILY:

CHEMICAL FORMULA: PRODUCT USE: Analytical Reagent

**SECTION 1 NOTES:** 

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS** 

INGREDIENT CAS NO. % Composition SARA 313 REPORTABLE

Ammonia 1336-21-6 50%

**SECTION 2 NOTES:** 

#### **SECTION 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** 

ROUTES OF ENTRY: Eyes, ingestion and contact hazard

POTENTIAL HEALTH EFFECTS:

**EYES:** May cause irritation.

 $\textbf{SKIN:}\ \text{May cause irritation to broken or compromised skin.}$ 

**INGESTION**: May cause esophageal burning and irritation and gastrointestinal problems.

**INHALATION:** Irritating to respiratory system.

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Previously irritated or damaged skin.

**CARCINOGENICITY:** This product is not expected to be carcinogenic.

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK3 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

EYES: Seek medical aid. Gently lift eyelids and flush continuously with cold water for 15 minutes.

SKIN: Generally the product does not irritate skin

**INGESTION:** Seek medical aid. Do not induce vomiting unless instructed by medical professional. If victim is conscious and alert, give 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION: (General)** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

#### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** 

### **SECTION 5: FIRE-FIGHTING MEASURES**

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable

FLASH POINT: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:

OTHER:

EXTINGUISHING MEDIA: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

**SECTION 5 NOTES:** 

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Wear protective equipment. Keep unprotected persons away.

**ENVIRONMENTAL PRECAUTIONS:** Do not allow to enter sewers, surface, or ground water. Inform respective authorities in case of seepage into water course or sewage system.

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP:** Use neutralizaing agent. Dispose contaminated material as waste and ensure adequate ventilation.

**SECTION 6 NOTES:** 

# **SECTION 7: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING: Thorough dedusting.

INFORMATION ABOUT FIRE AND EXPLOSION PROTECTION: No special measured required.

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: No special requirements.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Not required.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: Keep container tightly sealed.

**SPECIFIC END USE(S):** No further relevant information available.

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK3 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

**OTHER PRECAUTIONS:** 

**SECTION 7 NOTES:** 

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**RESPIRATORY PROTECTION:** In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device.

**EYE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure. The glove material has to be impermeable and resistant to the product, substance, preparation, or chemical mixture. Selection of the glove material is based on penetration times, rates of diffusion, and the degradation of the glove material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate protective clothing to prevent skin exposure.

### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR**: Not determined

**ODOR:** Characteristic

PHYSICAL STATE: Liquid

pH AS SUPPLIED: N/A

**BOILING POINT: N/A** 

**MELTING POINT:** N/A

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): N/A

**EVAPORATION RATE: N/A** 

FLAMMABILITY: Not flammable
SOLUBILITY IN WATER: Soluble

PERCENT SOLIDS BY WEIGHT: <1%

PERCENT VOLATILE: None

MOLECULAR WEIGHT: Mixture

**FILE NO.:** AS-K25657-KW

NAME OF PRODUCT: dK3 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

STABILITY: This product is expected to be stable under normal conditions of storage and use.

CONDITIONS TO AVOID (STABILITY): No further relevant information is available.

INCOMPATIBILITY (MATERIAL TO AVOID): No further relevant information is available.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No dangerous decomposition products are known.

HAZARDOUS POLYMERIZATION: No further relevant information is available.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL INFORMATION:** When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**SECTION 11 NOTES:** 

#### **SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION**: No further relevant information available.

**GENERAL NOTES:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewer system

**SECTION 12 NOTES:** 

### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### **WASTE DISPOSAL METHOD:**

RECOMMENDATION: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### **UNCLEANED PACKAGING:**

**RECOMMENDATION:** Disposal must be made according to official regulations.

**SECTION 13 NOTES:** 

# SECTION 14: TRANSPORT INFORMATION

#### **U.S. DEPARTMENT OF TRANSPORTATION**

**PROPER SHIPPING NAME: AMMONIA SOLUTION** 

HAZARD CLASS: 8 ID NUMBER: UN2672 PACKING GROUP: III LABEL STATEMENT:

### WATER TRANSPORTATION

PROPER SHIPPING NAME: AMMONIA SOLUTION

HAZARD CLASS: 8
ID NUMBER: UN2672
PACKING GROUP: III
LABEL STATEMENTS:

# AIR TRANSPORTATION

PROPER SHIPPING NAME: AMMONIA SOLUTION

HAZARD CLASS: 8
ID NUMBER: UN2672

FILE NO.: AS-K25657-KW

NAME OF PRODUCT: dK3 Isothiazolinone Test Reagent Reviewed on: Sept 23 2011

PACKING GROUP: || LABEL STATEMENTS:

UN "Model Regulation": UN2672, AMMONIA SOLUTION, ENVIRONMENTALLY HAZARDOUS, 8, III

**OTHER AGENCIES:** 

**SECTION 14 NOTES:** 

## **SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS** 

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not listed

311/312 HAZARD CATEGORIES: None
313 REPORTABLE INGREDIENTS: None

**STATE REGULATIONS: None** 

FILE NO.: AS-K25666-KW

NAME OF PRODUCT: dK5 Isothiazolinone Test Reagent Reviewed on: Sept 29, 2011

### **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: Silica Standard 1mL=1mg

SYNONYMS:

PRODUCT CODES: R-2665

CHEMICAL NAME:

CHEMICAL FAMILY:

CHEMICAL FORMULA: PRODUCT USE: Analytical Reagent

### **SECTION 1 NOTES:**

# SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	% Composition	SARA 313 REPORTABLE
Disodium wolframate	13517-24-3	10.0%	
Phosphoric acid	7664-38-2	10.0%	
Hydrogen chloride	7647-01-0	5.0%	
SECTION 2 NOTES:			

# **SECTION 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** 

ROUTES OF ENTRY: Eyes, ingestion and contact hazard

**POTENTIAL HEALTH EFFECTS:** 

EYES: May cause irritation.

SKIN: May cause irritation to broken or compromised skin.

**INGESTION**: May cause esophageal burning and irritation and gastrointestinal problems.

**INHALATION:** Not considered an inhalation hazard.

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Previously irritated or damaged skin.

CARCINOGENICITY: This product is not expected to be carcinogenic.

**FILE NO.:** AS-K25666-KW

NAME OF PRODUCT: dK5 Isothiazolinone Test Reagent Reviewed on: Sept 29, 2011

#### **SECTION 4: FIRST AID MEASURES**

EYES: Seek medical aid. Gently lift eyelids and flush continuously with water for 15 minutes.

SKIN: Seek medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water.

**INGESTION:** Seek medical aid. Do not induce vomiting unless instructed by medical professional. If victim is conscious and alert, give 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

**INHALATION: (General)** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**SECTION 4 NOTES:** 

#### **SECTION 5: FIRE-FIGHTING MEASURES**

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable

FLASH POINT: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:

OTHER:

**EXTINGUISHING MEDIA:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

**SECTION 5 NOTES:** 

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Dilute area with water, absorb onto inert material and dispose of in an approved waste container for disposal

 $\textbf{ENVIRONMENTAL PRECAUTIONS:} \ \ \textbf{Do not allow to enter sewers/surface or ground water.}$ 

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEANUP:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

**SECTION 6 NOTES:** 

### **SECTION 7: HANDLING AND STORAGE**

HANDLING AND STORAGE: Store in a dry area in a tightly closed container away from direct sunlight.

**OTHER PRECAUTIONS:** 

FILE NO.: AS-K25666-KW

NAME OF PRODUCT: dK5 Isothiazolinone Test Reagent Reviewed on: Sept 29, 2011

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**RESPIRATORY PROTECTION:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

**EYE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear appropriate protective clothing to prevent skin exposure.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Colorless

**ODOR:** None

PHYSICAL STATE: Liquid

pH AS SUPPLIED: N/A

**BOILING POINT:** N/A

**MELTING POINT: N/A** 

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): N/A

**EVAPORATION RATE: N/A** 

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

**SOLUBILITY IN WATER:** completely miscible

**PERCENT SOLIDS BY WEIGHT: <1%** 

**PERCENT VOLATILE: None** 

MOLECULAR WEIGHT: Mixture

**SECTION 9 NOTES:** 

## **SECTION 10: STABILITY AND REACTIVITY**

FILE NO.: AS-K25666-KW

NAME OF PRODUCT: dK5 Isothiazolinone Test Reagent Reviewed on: Sept 29, 2011

STABILITY: This product is expected to be stable under normal conditions of storage and use.

**CONDITIONS TO AVOID (STABILITY):** 

INCOMPATIBILITY (MATERIAL TO AVOID): Items incompatible with water

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: N/A

HAZARDOUS POLYMERIZATION: Will not occur

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

TOXICOLOGICAL INFORMATION: None available

**SECTION 11 NOTES:** 

#### **SECTION 12: ECOLOGICAL INFORMATION**

#### **ECOLOGICAL INFORMATION:**

**GENERAL NOTES:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewer system

**SECTION 12 NOTES:** 

## **SECTION 13: DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

UNCLEANED PACKAGING: Disposal must be made according to official regulation.

**RCRA HAZARD CLASS:** 

# SECTION 13: DISPOSAL CONSIDERATIONS (con't)

**SECTION 13 NOTES:** 

# SECTION 14: TRANSPORT INFORMATION

### **U.S. DEPARTMENT OF TRANSPORTATION**

PROPER SHIPPING NAME:

ADR: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID, SOLUTION) IMDG, IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID, SOLUTION)

HAZARD CLASS: 8
ID NUMBER: UN3264
PACKING GROUP: III
LABEL STATEMENT:

FILE NO.: AS-K25666-KW

NAME OF PRODUCT: dK5 Isothiazolinone Test Reagent Reviewed on: Sept 29, 2011

WATER TRANSPORTATION

PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID,

SOLUTION)

HAZARD CLASS: 8
ID NUMBER: UN3264
PACKING GROUP: III
LABEL STATEMENTS:

**AIR TRANSPORTATION** 

PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID,

SOLUTION)

HAZARD CLASS: 8
ID NUMBER: UN3264
PACKING GROUP: III
LABEL STATEMENTS:

ADR

Tunnel restriction code: E

UN "Model Regulation": UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID,

SOLUTION), 8, III

**OTHER AGENCIES:** 

**SECTION 14 NOTES:** 

### **SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS** 

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not listed

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS: None