



# KENCRO

## CHEMICALS

CITRIC ACID ANHYDROUS

### MATERIAL SAFETY DATA SHEET

#### SECTION 1: PRODUCT AND COMPANY INFORMATION

**PRODUCT IDENTIFIER:** CITRIC ACID ANHYDROUS  
**PRODUCT USE:** ADDITIVE  
**CHEMICAL FAMILY:** ORGANIC ACID  
**SUPPLIER'S NAME AND ADDRESS:** KENCRO CHEMICALS LIMITED  
2172 WYECROFT RD., UNIT #4  
OAKVILLE, ON  
L6L 5V6  
905-827-4133  
**24 HR. EMERGENCY NUMBER:** 613-996-6666 (CANUTEC)

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

INGREDIENTS	C.A.S. #	WT.%	T.L.V.	LD50, ROUTE	LC50, ROUTE
CITRIC ACID ANHYDROUS	77-92-9	60 - 100	N/AV.	5.0G/KG (ORAL)	N/AV.

#### SECTION 3: HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

SOLID, CRYSTALLINE AND ODOURLESS.  
DANGER! CAN CAUSE BURNING AND IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT.

##### SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE:

**SKIN CONTACT:** SLIGHT IRRITATION, MAY BURN.  
**EYE CONTACT:** SLIGHT IRRITATION, MAY BURN. CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF THE EYE INJURY.  
**INHALATION:** IRRITATION, SORE THROAT, COUGH, SHORTNESS OF BREATH.  
**INGESTION:** IRRITATION, MAY BURN. DO NOT INGEST.  
**POTENTIAL CHRONIC HEALTH EFFECTS:** IRRITATION BY ALL ROUTES, MAY BURN.

#### SECTION 4: FIRST AID MEASURES

**INHALATION:** MOVE EXPOSED PERSON TO FRESH AIR. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION OR OXYGEN BY TRAINED PERSONNEL. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND. GET MEDICAL ATTENTION IMMEDIATELY.

**SKIN CONTACT:** IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

**EYE CONTACT:** CHECK FOR AND REMOVE ANY CONTACT LENSES. IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. SEEK MEDICAL ATTENTION IMMEDIATELY AFTER MINIMUM 15 MINUTE EYE FLUSH IS COMPLETE.

**INGESTION:** WASH OUT MOUTH WITH WATER. IMMEDIATELY GIVE TWO GLASSES OF WATER AND INDUCE VOMITING BY EITHER GIVING IPECAC SYRUP OR BY PLACING FINGER AT THE BACK OF THE THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. SEEK MEDICAL ATTENTION IMMEDIATELY.

## SECTION 5: FIRE FIGHTING MEASURES

### FIRE HAZARDS/CONDITION OF FLAMMABILITY:

NO SPECIFIC FIRE OR EXPLOSION HAZARD.

### FLASH POINT:

N/AP.

### FLASH POINT METHOD:

N/AP.

### AUTO IGNITION TEMPERATURE:

N/AP.

### LOWER FLAMMABLE LIMIT:

N/AP.

### UPPER FLAMMABLE LIMIT:

N/AP.

(% BY VOL.)

(% BY VOL.)

### FLAME PROJECTION LENGTH:

N/AP.

### EXPLOSION DATA: SENSITIVITY TO MECHANICAL IMPACT/STATIC DISCHARGE:

NOT EXPECTED TO BE SENSITIVE TO MECHANICAL IMPACT OR STATIC DISCHARGE.

### SUITABLE EXTINGUISHING MEDIA:

WATER FOG, CARBON DIOXIDE, FOAM OR DRY CHEMICAL (FOR AREA FIRES). USE AN EXTINGUISHING AGENT SUITABLE FOR SURROUNDING FIRE.

### SPECIAL FIRE-FIGHTING PROCEDURES/EQUIPMENT:

FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

### HAZARDOUS COMBUSTION PRODUCTS:

FIRE OR EXCESSIVE HEAT MAY CAUSE PRODUCTION OF HAZARDOUS DECOMPOSITION PRODUCTS, INCLUDING CARBON MONOXIDE AND CARBON DIOXIDE.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### LEAK AND SPILL PROCEDURES:

NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. EVACUATE SURROUNDING AREAS. DO NOT TOUCH OR WALK THROUGH SPILLED MATERIAL. AVOID CONTACT WITH EYES AND SKIN. DO NOT BREATHE DUST, PROVIDE ADEQUATE VENTILATION. CLEAN UP BY VACUUM OR BROOM, SWEEPING INTO DISPOSAL DRUM.

### NEUTRALIZING AGENT:

SODA ASH OR SODIUM BICARBONATE.

## SECTION 7: HANDLING AND STORAGE

### SAFE HANDLING PROCEDURES:

PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). EATING, DRINKING AND SMOKING SHOULD BE PROHIBITED IN AREAS WHERE THIS MATERIAL IS HANDLED, STORED AND PROCESSED. WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. DO NOT INGEST. USE ONLY WITH ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. KEEP IN THE ORIGINAL CONTAINER OR AN APPROVED ALTERNATIVE MADE FROM A COMPATIBLE MATERIAL, KEPT TIGHTLY CLOSED WHEN NOT IN USE. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER.

### STORAGE REQUIREMENTS:

STORE IN ORIGINAL CONTAINER PROTECTED FROM HEAT AND DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS AND FOOD AND DRINK. PROTECT FROM HUMIDITY.

### INCOMPATIBLE MATERIALS:

AVOID CONTACT WITH STRONG ALKALIES AND OXIDIZING AGENTS.

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

### ENGINEERING CONTROLS:

USE ONLY WITH ADEQUATE VENTILATION. IF USER OPERATIONS GENERATE DUST, FUMES, GAS, VAPOUR OR MIST, USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS.

### GLOVES/TYPE:

RUBBER GLOVES

### RESPIRATORY/TYPE:

NIOSH APPROVED DUST MASK

### EYE/TYPE:

SAFETY GLASSES WITH SIDE SHIELDS. CHEMICAL SAFETY GOGGLES WHEN IN CONTACT.

### CLOTHING/TYPE:

PERSONAL PROTECTIVE EQUIPMENT FOR THE BODY SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT. RECOMMENDED: OVERALL.

**OTHER/TYPE:** WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSE. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	CRYSTALLINE POWDER	<b>APPEARANCE:</b>	WHITE
<b>ODOUR:</b>	ODOURLESS	<b>ODOUR THRESHOLD:</b>	N/AP.
<b>PH:</b>	1.5 – 2.5 (5% SOLUTION)	<b>BOILING POINT:</b>	N/AV.
<b>SPECIFIC GRAVITY:</b>	1.665	<b>MELTING/FREEZING POINT:</b>	153°C (307°F)
<b>COEFFICIENT OF WATER/OIL</b>		<b>SOLUBILITY IN WATER:</b>	134G/100G WATER (APPRECIABLE)
<b>DISTRIBUTION:</b>	N/AP.	<b>DENSITY:</b>	1.665G/ML
<b>EVAPOURATION RATE:</b>	N/AP.	<b>VAPOUR PRESSURE (mmHg):</b>	N/AV.
<b>MOLECULAR WEIGHT:</b>	192.12		
<b>MOLECULAR FORMULA:</b>	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>		

#### SECTION 10: REACTIVITY AND STABILITY DATA

**STABILITY AND REACTIVITY:**  
STABLE UNDER NORMAL CONDITIONS.

**CONDITIONS TO AVOID:**  
HIGH TEMPERATURE, SPARKS AND OPEN FLAMES.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED AND POLYMERIZATION WILL NOT OCCUR.

#### SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL DATA:** REFER TO SECTION 2 FOR INDIVIDUAL INGREDIENT LD50'S.

**CARCINOGENIC STATUS:** THIS PRODUCT DOES NOT CONTAIN ANY INGREDIENT DESIGNATED BY NTP.

**REPRODUCTIVE EFFECTS:** N/AV.

**TERATOGENICITY:** N/AV.

**MUTAGENICITY:** N/AV.

**SENSITIZATION TO MATERIAL:**  
REFER TO SECTION 3 FOR SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE.

**SYNERGISTIC MATERIALS:** NO KNOWN INFORMATION AVAILABLE.

#### SECTION 12: ECOLOGICAL INFORMATION

**BIODEGRADABILITY:** EASILY DEGRADABLE.

**TOXICITY EFFECTS:** HIGHLY TOXIC TO FISH, NOT CONSIDERED TO BE TOXIC FOR BACTERIA.

**AIR POLLUTION:** 50MG/M<sup>3</sup> FOR A MASS EMISSION >0.5KG/H

#### SECTION 13: DISPOSAL CONSIDERATIONS

**HANDLING FOR DISPOSAL:** THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE. EMPTY CONTAINERS OR LINERS MAY RETAIN SOME PRODUCT RESIDUE. THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. DO NOT PUNCTURE, DRAG OR SLIDE CONTAINERS. DO NOT SMOKE IN ANY CHEMICAL HANDLING OR STORAGE AREA. WASH HANDS AFTER HANDLING.

**METHOD OF DISPOSAL:** DISPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR. DISPOSE OF IN ACCORDANCE WITH FEDERAL, PROVINCIAL AND MUNICIPAL ENVIRONMENTAL CONTROL REGULATIONS.

#### SECTION 14: TRANSPORTATION INFORMATION

**PROPER SHIPPING NAME:** CITRIC ACID ANHYDROUS

**TDG CLASSIFICATION:** NON-REGULATED

**SECTION 15: REGULATORY INFORMATION**

WHMIS CLASSIFICATION: CLASS D2B (POISONOUS AND INFECTIOUS MATERIALS, TOXIC)

**SECTION 16: OTHER INFORMATION**

<b>LEGEND:</b>	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	LC	LETHAL CONCENTRATION
	LD	LETHAL DOSE
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	NTP	NATIONAL TOXICOLOGICAL PROGRAM
	TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
	TLV	THRESHOLD LIMIT VALUE
	WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

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**MSDS PREPARATION DATE:** (DD/MM/YYYY)  
01/06/2011

**DISCLAIMER OF LIABILITY**

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