



KENCRO

CHEMICALS

UREA, GRANULAR

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: UREA, GRANULAR
PRODUCT USE: FERTILIZER
CHEMICAL FAMILY: AMIDES
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. %	LC50	LD50 (ORAL, RAT)
UREA	57-13-6	60 - 100	N/AV.	8471MG/KG

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. THE EFFECTS (IRRITATION) ON SKIN AND EYE MAY BE DELAYED AND THE DAMAGE MAY OCCUR WITHOUT THE SENSATION OF PAIN.

THE UREA SOLUTION BECOMES CORROSIVE WHEN DISSOLVED IN WATER.
LARGE CONCENTRATION OF UREA IN BLOOD INCREASES THE RISK OF GLAUCOMA.

SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE:

SKIN CONTACT: THIS PRODUCT MAY CAUSE IRRITATION DUE TO ITS ABRASIVE ACTION. PROLONGED CONTACT WITH DUST MAY CAUSE DRYING OF THE SKIN DUE TO ABSORPTION OF OILS AND MOISTURE. THERE IS A RISK OF DESTRUCTION OF THE NATURAL FATTY LAYER OF SKIN, DRYING AND CRACKING. CONTACT WITH HOT PRODUCT CAN CAUSE THERMAL BURNS.

EYE CONTACT: THIS PRODUCT MAY CAUSE IRRITATION, REDNESS AND INJURIES DUE TO ITS ABRASIVE ACTION. PROLONGED CONTACT WITH DUST MAY CAUSE DRYING OF THE EYES DUE TO ABSORPTION OF OILS AND MOISTURE. CONTACT WITH HOT PRODUCT CAN CAUSE THERMAL BURNS.

INHALATION: THE PRODUCT MAY CAUSE IRRITATION TO THE NOSE, THROAT AND RESPIRATORY TRACT. DUSTS MAY CAUSE COUGHING AND SNEEZING. SERIOUS EFFECTS MAY BE DELAYED FOLLOWING EXPOSURE.

INGESTION: INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION. INGESTION OF LARGE QUANTITIES MAY CAUSE NAUSEA, GASTROINTESTINAL DISCOMFORT AND ABDOMINAL PAIN.

POTENTIAL CHRONIC HEALTH EFFECTS: CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. MATERIAL MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: SKIN, EYES.

FROM INCOMPATIBLE MATERIALS AND FOOD AND DRINK. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

INCOMPATIBLE MATERIALS:

OXIDIZERS, REDUCING AGENTS, HALOGENS, ACIDS, ALKALIS, NITRATES, AMMONIUM NITRATE, ACRYLONITRILE BUTADIENE STYRENE, POLYETHYLENE, IRON AND ALLOYS, COPPER AND ALLOYS, ALUMINIUM AND ALUMINIUM ALLOYS, ZINC AND ALLOYS, MILD STEEL, SODIUM NITITE, POTASSIUM NITRITE, CHLORIDE CHROMYL, NITROSYL PERCHLORATE, GALLIUM PERCHLORATE, TITANIUM TETRACHLORIDE. SODIUM HYPOCHLORITE, CALCIUM HYPOCHLORITE OR PHOSPHOROUS PENTACHLORIDE REACT WITH UREA TO FORM NITROGEN TRICHLORIDE AN EXPLOSIVE COMPOUND.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS				
INGREDIENTS	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
UREA	10 MG/M ³	N/AV.	N/AV.	N/AV.

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

ENGINEERING CONTROLS:

USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS. THE ENGINEERING CONTROLS ALSO NEED TO KEEP GAS, VAPOR OR DUST CONCENTRATIONS BELOW ANY LOWER EXPLOSIVE LIMITS.

GLOVES/TYPE:

USE GLOVES APPROPRIATE FOR WORK OR TASK BEING PERFORMED. RECOMMENDED: NATURAL RUBBER (LATEX).

RESPIRATORY/TYPE:

RESPIRATORY SELECTION MUST BE MADE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR. RECOMMENDED: USE APPROPRIATE NIOSH APPROVED DUST RESPIRATOR IF PEL/TLV MAY BE EXCEEDED.

EYE/TYPE:

SAFETY EYEWEAR SHOULD BE USED WHEN THERE IS A LIKELIHOOD OF EXPOSURE. RECOMMENDED: SAFETY GLASSES WITH SIDE SHIELDS.

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. LAUNDRY BEFORE REUSE. RECOMMENDED: LAB COAT.

OTHER/TYPE:

ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION. WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	SOLID POWDER OR DRY GRANULES	APPEARANCE:	WHITE
ODOUR:	SLIGHT AMMONIA	ODOUR THRESHOLD:	17 PPM
PH:	7 TO 9.5 [CONC. (% W/W): 10%]	BOILING POINT:	DECOMPOSES
SPECIFIC GRAVITY:	0.74 G/CM ³	MELTING/FREEZING POINT:	132°C (270°F)
COEFFICIENT OF WATER/OIL		SOLUBILITY IN WATER:	PARTIAL
DISTRIBUTION:	N/AP.	VAPOUR PRESSURE:	0.08 KPA (0.6MM HG)
EVAPOURATION RATE:	N/AP.		
MOLECULAR WEIGHT:	60.06		
MOLECULAR FORMULA:	CO ₂ (NH ₂) ₂		

SECTION 10: REACTIVITY AND STABILITY DATA

STABILITY AND REACTIVITY:

THE PRODUCT IS STABLE. UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS REACTIONS WILL NOT OCCUR. UNDER NORMAL CONDITIONS, POLYMERIZATION WILL NOT OCCUR.

CONDITIONS TO AVOID:

KEEP AWAY FROM HEAT, SPARKS AND FLAME. PROTECT FROM MOISTURE. HYPOCHLORITES CAN REACT WITH UREA TO FORM AN EXPLOSIVE COMPOUND (NITROGEN TRICHLORIDE).

HAZARDOUS DECOMPOSITION PRODUCTS:

THE PRODUCTS RELEASED DURING THERMAL DECOMPOSITION OF THIS MATERIAL IS TOXIC AND MAY INCLUDE AMMONIA, CYANURIC ACID, BIURET, OXIDES OF CARBON, NITROGEN AND IRRITATING GASES.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: SEE SECTION 2 FOR ACUTE TOXICITY.

CARCINOGENIC STATUS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

REPRODUCTIVE EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

TERATOGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

MUTAGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

DISORDERS INVOLVING ANY TARGET ORGANS MENTIONED IN THIS MSDS AS BEING AT RISK MAY BE AGGRAVATED BY OVER-EXPOSURE TO THIS PRODUCT.

SECTION 12: ECOLOGICAL INFORMATION**ENVIRONMENTAL EFFECTS:**

WILL SLOWLY RELEASE AMMONIA AND DEGRADE TO NITRATE. AMMONIA IS A TOXIC HAZARD TO FISH. HOWEVER, AMMONIA RELEASE IS SLOW, MAKING UREA MUCH LESS TOXIC THAN AMMONIUM SALTS. UREA WILL PROMOTE ALGAE GROWTH WHICH MAY DEGRADE WATER QUALITY AND TASTE.

ENVIRONMENTAL EXPOSURE CONTROLS:

EMISSIONS FROM VENTILATION OR WORK PROCESS EQUIPMENT SHOULD BE CHECKED TO ENSURE THEY COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION LEGISLATION. IN SOME CASES, FUME SCRUBBERS, FILTERS OR ENGINEERING MODIFICATIONS TO THE PROCESS EQUIPMENT WILL BE NECESSARY TO REDUCE EMISSIONS TO ACCEPTABLE LEVELS.

ECOTOXICOLOGICAL:

AQUATIC TOXICITY:

ACUTE EC50 3910000 UG/L FRESH WATER/48HR DAPHNIA – PAHNIA MAGNA – NEONATE - <24HOURS

ACUTE LC50 .1000MG/L MARINE WATER/48HR CRUSTACEANS – CHAETOGAMMARUS MARINUS – YOUNG – 5MM

ACUTE LC50 5000 UG/L FRESH WATER/96HR FISH – COLISA FASCIATA - FINGERING

OTHER ADVERSE EFFECT: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SECTION 13: DISPOSAL CONSIDERATIONS

HANDLING FOR DISPOSAL: THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE. THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWER. EMPTY CONTAINERS OR LINERS MAY RETAIN SOME PRODUCT RESIDUES.

WASTE DISPOSAL: DISPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

SECTION 14: TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: UREA, GRANULAR

TDG CLASSIFICATION: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION: NOT CONTROLLED UNDER WHMIS

SECTION 16: OTHER INFORMATION

LEGEND:	ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	EC	EFFECTIVE CONCENTRATION
	LC	LETHAL CONCENTRATION
	LD	LETHAL DOSE
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL	PERMISSIBLE EXPOSURE LIMIT
SCBA	SELF CONTAINED BREATHING APPARATUS
STEL	SHORT TERM EXPOSURE LIMIT
TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
TLV	THRESHOLD LIMIT VALUE
TWA	TIME WEIGHTED AVERAGE
WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

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MSDS PREPARATION DATE: (DD/MM/YYYY)
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