



# KENCRO CHEMICALS

## PRODUCT : UREA PRILLS

### SECTION 1 : PRODUCT INFORMATION

T.D.G. CLASSIFICATION	NOT CONTROLLED UNDER TDG
UN NUMBER	N.A.P.
PACKING GROUP	N.A.P.
PRODUCT NAME	UREA PRILLS
CHEMICAL NAME	UREA
SYNONYMS	CARBAMIDE, CARBONYLDMINE
CHEMICAL FORMULA	CO <sub>2</sub> (NH <sub>2</sub> ) <sub>2</sub>
MOLECULAR WEIGHT	60.06

### SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	T.L.V.	C.A.S. #	LD/50,ROUTE,SPECIE	LC/50,ROUTE,SPECIE
UREA (NH <sub>2</sub> CONH <sub>2</sub> )	99% Approx		000-057-136	N.A.V.	N.A.V.
BURET (NH <sub>2</sub> CONHCONH <sub>2</sub> )	1% Approx				
FREE AMMONIA	<200 ppm				

\* TOTAL NITROGEN FOR PURE UREA IS 46.6%

\*\* EXPOSURE SHOULD BE KEPT BELOW THAT OF A NUISANCE DUST: OSHA PEL 15mg/m<sup>3</sup> RESPIRABLE DUST

### SECTION 3: PHYSICAL DATA

PHYSICAL STATE	SOLID GRANULAR PRILL, WHITE CRYSTAL
ODOUR	ODOURLESS WITH A SLIGHT AMMONIA ODOUR
ODOUR THRESHOLD	N.A.P.
VAPOUR PRESSURE	N.A.P.
VAPOUR DENSITY (AIR=1)	N.A.P.
EVAPORATION RATE	N.A.P.
BOILING POINT	DECOMPOSES BEFORE BOILING (46-49lbs/cubic ft)
MELTING POINT	132°C (270°F)
PH (10% SOLN/WATER)	7.0-9.8
SPECIFIC GRAVITY (WATER=1)	1.33 @ 20/4°C
SOLUBILITY IN WATER	@20°C (68°F) 51.6g/100 solution
COEFFICIENT OF WATER/OIL DIST.	N.A.P.
PERCENT VOLATILE	N.A.P.
COEFFICIENT WATER/OIL	N.A.P.
PERCENT SOLUBLE	N.A.V.
BULK DENSITY	750-780 KG/DM <sup>3</sup>

### SECTION 4: FIRE AND EXPLOSION DATA

FLAMMABILITY	
IF YES, UNDER WHICH CONDITIONS?	
EXTINGUISHING MEDIA	USE THAT WHICH IS APPROPRIATE FOR THE SURROUNDING FIRE. THIS MATERIAL IS NONCOMBUSTIBLE. A WATER SPRAY CAN BE USED TO WET DOWN THE MATERIAL IF ACCIDENTALLY CONTAMINATED WITH OXIDIZING AGENTS SUCH AS NITRATES, HYPOCHLORITES. * UREA DUST CLOUD REPORTED NOT TO IGNITE AT 900°C (1652°F)
SPECIAL PROCEDURES	WEAR NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS.
FLASH POINT(C), METHOD	N.A.P.
AUTO IGNITION TEMPERATURE	N.A.P.
T.D.G. FLAM. CLASS	NOT REGULATED

## **PRODUCT: UREA**

UPPER FLAMMABLE LIMIT (UFL)	N.AP.
LOWER FLAMMABLE LIMIT (LFL)	N.AP.
HAZARDOUS COMBUSTION PRODUCTS	NONCOMBUSTIBLE
EXPLOSION DATA	
SENSITIVITY TO STATIC DISCHARGE	N.AV.
SENSITIVITY TO IMPACT	N.AV.
RATE OF BURNING	NONE
EXPLOSIVE POWER	N.AV.

### **SECTION 5: REACTIVITY DATA**

CHEMICAL STABILITY	
YES	STABLE AT ROOM TEMPERATURE UNDER NORMAL STORAGE AND HANDLING CONDITIONS.
NO, WHICH CONDITIONS?	
COMPATIBILITY WITH OTHER SUBSTANCES:	
YES	
NO, WHICH ONES?	GALLIUM PERCHLORATE AND STRONG OXIDE AGENTS (PERMANGANTE, DICHLOLOERTE, NITRATE, CHLORINE, ETC.) AVOID CONTACT WITH CAUSTIC AND ALKALIES. THERMAL AND OXIDATIVE DEGRATION PRODUCTS INCLUDE AMMONIA, CYANURIC ACID, BLURTET, CARBON DIOXIDE.
HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID	DOES NOT POLYMERIZE HYPOCHLORITES CAN REACT WITH UREA TO FORM AN EXPLOSIVE COMPOUND. (NITROGEN TRICHLORIDE)
HAZARDOUS PRODUCTS OF DECOMPOSITION	N.AV.

### **SECTION 6: TOXICOLOGICAL PROPERTIES**

ROUTE OF ENTRY	
SKIN CONTACT	PROLONGED SKIN CONTACT MAY CAUSE STINGING AND MILD IRRITATION. PRACTICE GOOD PERSONAL HYGIENE DAILY TO MINIMIZE POSSIBLE INDUSTRIAL DERMATITIS.
EYE CONTACT	IT IS AN IRRITANT TO EYES AS MUCEOUSE MEMBRANES.
INHALATION	EXCESSIVE INHALATION OF DUST MAY CAUSE IRRITATION AND COUGHING; HEAVILY EXPOSED WORKERS WITH ASTHMA MAY HAVE DIFFICULTY BREATHING. INDIVIDUALS WITH KIDNEY IMPAIRMENT OR ASMATIC CONDITIONS SHOULD HAVE A PHYSICIAN'S APPROVAL BEFORE EXPOSURE TO UREA DUST.
EFFECTS OF ACUTE EXPOSURE	REFER TO ROUTE OF ENTRY
EFFECTS OF CHRONIC EXPOSURE	NO HUMAN CHRONIC EFFECTS REPORTED. (UREA IS NORMAL COMPONENT OF HUMAN URINE, A PRODUCT OF METABOLISM).
IRRITANCY OF MATERIAL .	SEE ABOVE
SENSITIZING CAPABILITY OF MATERIAL	N.AV.
CARCINOGENICITY OF MATERIAL	N.AV.
REPRODUCTIVE TOXICITY	N.AV.
MUTAGENICITY	N.AV.
TERATOGENICITY	N.AV.
SYNERGISTIC MATERIALS	N.AV.

### **SECTION 7: PREVENTATIVE MEASURES**

GLOVES/TYPE	USE RUBBER GLOVES.
RESPIRATORY/TYPE	DUST RESPIRATORS SHOULD BE AVAILABLE FOR NON-ROUTINE OR EMERGENCY USE OF EXPOSURE ABOVE THE NUISANCE PARTICULATE LEVEL (15 MG/M <sup>3</sup> ).
EYE/TYPE	AVOID EYE CONTACT BY USE OF CHEMICAL GOGGLES WHERE DUSTY CONDITIONS OCCUR. EYE WASH STATIONS AND WASHING FACILITIES SHOULD BE ACCESSIBLE IN AREAS OF USE AND HANDLING.
CLOTHING /TYPE	WEAR CLEAN WORK CLOTHING. BODY COVERING CLOTHING APPROPRIATE FOR THE WORK SITUATION TO REDUCE SKIN CONTACT. PROMPTLY REMOVE GROSSLY CONTAMINATED CLOTHING; LAUNDER BEFORE REUSE.

## **PRODUCT: UREA**

OTHER/TYPE	SHOWER DAILY AFTER WORKSHIFT OF DUST EXPOSURE TO REMOVE POTENTIAL IRRITANTS FROM SKIN, WITH A CHANGE TO SEPARATELY LOCERED STREET CLOTHING AFTER SHOWER.
ENGINEERING CONTROLS	PROVIDE GENERAL VENTILATION AND LOCAL EXHAUST VENTILATION AS NEEDED TO KEEP AT A LOW LEVEL IN THE WORKPLACE.
LEAK/SPILL	CLEAN UP PERSONNEL SHOULD HAVE PROTECTION AGAINST INHALATION OF DUST. SWEEP UP OR SCOOP UP SPILLED MATERIAL FOR RECOVERY OR DISPOSAL, AVOIDING DUST CONDITIONS AND USING GOOD VENTILATION. DO NOT CONTAMINATE SOLID WASTE WITH OXIDIZING AGENTS AS NITRATES. FLUSH RESIDUE WITH MUCH WATER.
WASTE DISPOSAL	WASTE MAY BE BURIED IN AN APPROVED LANDFILL OR SPREAD ON FARMLAND AS FERTILIZER (IF OTHER CONTAMINATES WILL ALLOW THIS USE). DISPOSAL SHALL BE IN ACCORDANCE TO ALL APPLICABLE FEDERAL, PROVINCIAL AND MUNICIPAL WASTE REGULATIONS.
STORAGE NEEDS	STORE IN DRY AREA WITH NATURAL VENTILATION AWAY FROM SOURCES OF HEAT AND STRONG OXIDIZING AGENTS. PROTECT CONTAINERS FROM PHYSICAL DAMAGE. USE GOOD HOUSEKEEPING TECHNIQUES THAT WILL KEEP AIRBORNE PARTICULATE AND DUST DEPOSITS AT A MINIMUM. INCOMPATIBLE MATERIALS AND SUNLIGHT

### **SECTION 8: FIRST AID MEASURES**

#### **INSTRUCTIONS:**

**SKIN CONTACT:** WASH AFFECTED AREA WITH SOAP AND WATER.

**EYE CONTACT:** FLUSH THOROUGHLY WITH COPIUS AMOUNTS OF TEMPERED RUNNING WATER FOR 15 MINUTES, FLUSH UNDER EYELIDS.

**INGESTION:** GIVE SEVERAL GLASSES OF WATER TO DRINK TO DILUTE: THEN INDUCE VOMITING. SEEK MEDICAL ATTENTION FOR FURTHER TREATMENT, OBSERVATION AND SUPPORT AFTER FIRST AID.

**INHALATION:** REMOVE TO FRESH AIR. RESTORE AND/OR SUPPORT BREATHING AS NEEDED. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. OXYGEN TO BE ADMINISTERED BY TRAINED AND AUTHORIZED PERSONNEL ONLY.

**SPECIAL NOTE:** NEVER GIVE FLUIDS OR INDUCE VOMITING TO AN UNCONSCIOUS VICTIM. PLACE VICTIM IN A STABLE SIDE POSITION AND KEEP WARM.

### **SECTION 9 : PREPARATION INFORMATION**

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DATE	JUNE 2008

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#### **LEGEND:**

CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
LFL	LOWER FLAMMABLE LIMIT
MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
N.AP.	NOT APPLICABLE
N. AV.	NOT AVAILABLE
NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
TLV	THRESHOLD LIMIT VALUE
UFL	UPPER FLAMMABLE LIMIT