

JUL 30 1990

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DATE OF ISSUE
01/11/90SUPERSEDES
09/01/89

SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS
N/ATRADE NAME & SYNONYMS
TURF-KINGCHEMICAL FAMILY
AQUEOUS FERTILIZERFORMULA
X--MIXTUREMANUFACTURERS NAME:
NATIONAL CHEMSEARCH DIV. OF NCH CORP.ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
BOX 152170
IRVING, TEXAS 75015PREPARED BY:
KELLY SEALS/T.S.CHEMISTPRODUCT CODE NUMBER
0502EMERGENCY TELEPHONE NUMBER
214-438-1381

SECTION II- HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL
COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED
AS A WHOLE.

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV*	PEL*	CAS#
UREA	EYE IRR.	10MG/M3	1 NOT EST.	57-13-6
AMMONIUM HYDROXIDE	CORROSIV	25PPM	50PPM(T)	7664-41-7

SECTION IIA - NON-HAZARDOUS INGREDIENTS

NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE
SECRET REGISTRY # 409363-5122P

TURF-KING

SECTION III - PHYSICAL DATA

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BOILING PT. (FAHRENHEIT)	210	SPEC GRAVITY (H2O=1)	1.260
VAPOR PRESSURE (MM HG)	18	COLOR	LIGHT GREEN
VAPOR DENSITY (AIR=1)	0.6	ODOR	AMMONIACAL
PH @ 100%	7.3	CLARITY	TRANSPARENT
PERCENT VOLATILE BY VOLUME (%)	63	EVAPORATION RATE (BU AC = 1)	0.10
SOLUBILITY IN WATER	COMPLETE		
VISCOSITY	NON-VISCOUS		

SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED) NON-FLAMT.C.C.	FLAMMABLE LIMITS	LEL	UEL
		N/A	N/A
EXTINGUISHING MEDIA "ALCOHOL"	DRY	WATER	
X--FOAM X--FOAM X--CO2 X--CHEMICAL X--SPRAY			--OTHER
SPECIAL FIRE FIGHTING PROCEDURES			

N/A

UNUSUAL FIRE & EXPLOSION HAZARDS

N/A

NFPA HAZARD RATING (0=INSIGNIFICANT;1=SLIGHT;2=MODERATE;3=HIGH;4=EXTREME):
2 --HEALTH 0 --FLAMMABILITY 0 --REACTIVITY --SPECIAL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE :

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

EFFECTS OF OVEREXPOSURE

- ACUTE - (SHORT TERM EXPOSURE)
INHALATION OF THE MIST CAN BE IRRITATING TO THE LUNGS. EYE CONTACT CAN

CAUSE REDDENING AND TEARING. INGESTION OF A LARGE AMOUNT WILL CAUSE
NAUSEA, VOMITING AND DIARRHEA.

- CHRONIC - (LONG TERM EXPOSURE)
REPEATED EXPOSURE BY INHALATION IS IRRITATING TO THE LUNGS. THE EYES
WILL BE SEVERELY IRRITATED WITH REPEATED EXPOSURE.

PRIMARY ROUTE OF ENTRY: <-- INHALATION <-- INGESTION X<-- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION :
GET PERSON OUT OF CONTAMINATED AREA TO FRESH AIR. IF BREATHING HAS
STOPPED, ARTIFICIAL RESPIRATION SHOULD BE STARTED. OXYGEN MAY BE
ADMINISTERED, IF READILY AVAILABLE. SEEK MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:
IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES
HOLDING EYELIDS APART TO ENSURE FLUSHING OF THE ENTIRE EYE SURFACE. SEEK
MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:
IMMEDIATELY WASH CONTAMINATED SKIN WITH PLENTY OF SOAP AND WATER. IF
IRRITATION PERSISTS, SEEK MEDICAL ATTENTION IMMEDIATELY.

INGESTION :
CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. DO NOT INDUCE
VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL
ATTENTION IMMEDIATELY. IF VICTIM IS CONSCIOUS, GIVE LARGE AMOUNTS OF
WATER TO DILUTE STOMACH CONTENTS.

NOTES TO PHYSICIAN :

N/A

SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC	<--YES	NTP	<--YES	OSHA	<--YES	ACGIH	<--YES	OTHER	<--YES
X<--NO		X<--NO		X<--NO		X<--NO		X<--NO	

UREA
SKN-HMN: 22MG/ED-I MLD 2.
ORL-RAT TDLO: 821GM/KG IV-C:NED 2.
AMMONIUM HYDROXIDE
ORL-RAT LD50: 350MG/KG 2.
IHL-HMN LCLO: 3000PPM/5M 2.
UNK-MAN LDLO: 132MG/KG 2.

SECTION VII - REACTIVITY DATA

STABILITY	X<--STABLE	<--UNSTABLE	CONDITIONS TO AVOID

N/A

TURF-KING

(CONTINUED)

SECTION VII - REACTIVITY DATA

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INCOMPATIBILITY (MATERIALS TO AVOID)

STRONG ALKALIS RELEASE AMMONIA.

HAZARDOUS DECOMPOSITION PRODUCTS

HEATING TO DECOMPOSITION FORMS SO2.

HAZARDOUS	WILL NOT	MAY	CONDITIONS TO AVOID
X<--OCCUR		<--OCCUR	

POLYMERIZATION: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
STOP LEAK. CONTAIN SPILL. COLLECT AS MUCH OF THE MATERIAL AS POSSIBLE.
WASH CONTAMINATED AREA WITH DETERGENT.

WASTE DISPOSAL METHOD
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. THE
MATERIAL MAY BE FLUSHED DOWN DRAIN WITH LARGE AMOUNTS OF WATER.

NEUTRALIZING AGENT

NEUTRALIZE WITH LIME.

SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION
GOOD INDUSTRIAL HYGIENE PRACTICE DICTATES THAT THE WORK AREAS SHOULD
PROVIDE ADEQUATE VENTILATION OR CONTROLS TO MAINTAIN AND MEET OSHA
REQUIREMENTS.

RESPIRATORY PROTECTION
TYPICAL USE OF THIS PRODUCT DOES NOT REQUIRE THE USE OF A RESPIRATOR.
IF PRODUCT IS MISTED, USE NIOSH APPROVED MASK FOR SPRAY MIST.

PROTECTIVE GLOVES
PROTECTIVE RUBBER GLOVES IF REPEATED OR PROLONGED
SKIN CONTACT IS ANTICIPATED.

EYE PROTECTION
SAFETY GOGGLES SHOULD BE WORN IF METHOD OF AP-
PLICATION PRESENTS LIKELIHOOD OF EYE CONTACT.

OTHER PROTECTION
N/A

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STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
120 F. <---MAX 35 F. <---MIN	X			

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
KEEP CONTAINER CLOSED. STORE IN A COOL, DRY PLACE.
STORE IN ORIGINAL CONTAINER. AVOID DIRECT OR
PROLONGED CONTACT WITH SKIN AND EYES. WASH
THOROUGHLY AFTER HANDLING.

OTHER PRECAUTIONS
AVOID CONTAMINATING WATER SOURCES. DO NOT GRAZE
ANIMALS ON TREATED AREAS. KEEP OUT OF REACH OF
CHILDREN AND ANIMALS. READ LABEL BEFORE USE.

SECTION XI - REGULATORY INFORMATION

CHEMICAL NAME	C.A.S. NUMBER	UPPER % LIMIT
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N/A

THOSE INGREDIENTS LISTED ABOVE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF
313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF
1986 AND 40 CFR PART 372.

IF USE (USE EXEMPTION) APPEARS UNDER UPPER % LIMIT, END USERS ARE EXEMPT
FROM NOTIFICATION BECAUSE THE PRODUCT IS USED AND LABELED FOR ROUTINE
JANITORIAL WORK, OR THE PRODUCT IS USED AND LABELED FOR FACILITY GROUNDS
MAINTENANCE (SUCH AS FERTILIZERS AND HERBICIDES), OR THE PRODUCT IS USED AND
LABELED FOR MAINTAINING MOTOR VEHICLES.

SECTION XII - TRANSPORTATION * (FOR FUTURE USE)

APPLICABLE REGULATIONS	IMCO	TARIFF # D	ATA	MILITARY AIR (AFR 71-4)
<---49 CFR	<---IMCO	<---TARIFF # D	<---ATA	<---MILITARY AIR (AFR 71-4)

SHIPPING NAME

HAZARD CLASS	ID NUMBER	REPORT QTY
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LABELS	LIMITED QTY
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UNIT CONTAINER

DOT SPS CONTAINER	NET EXPLOSIVE WT.
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Turf-King

(CONTINUED) SECTION XII - TRANSPORTATION * (FOR FUTURE USE) PAGE : 06

AEROSOL PROPELLANT(S)

SECTION XIII - REFERENCES

1. VENDOR'S MSDS.
2. DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 6TH EDITION,
N. IRVING SAX.
3. THRESHOLD LIMIT VALUE FOR CHEMICAL SUBSTANCES IN THE WORK
ENVIRONMENT, 2ND EDITION, ACGIH, 1985.

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