1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER....

PREPARATION DATE .- 03/01/91 DATE MSDS PRINTED .- JUN 11. 1992

EM SCIENCE P.O. BOX 70 480 DEMOCRAT RD. GIBBSTOWN, N.J. 08027

A DIVISION OF EM INDUSTRIES INFORMATION PHONE NUMBER .- 609-354-9200 HOURS- MON. TO FRI. 8-30-5 CHEMTREC EMERGENCY NUMBER- 800-424-9300 HOURS- 24 HRS A DAY

CATALOG NUMBER-S--SX0692

CHEMICAL NAME...- SODIUM PERCHLORATE

TRADE NAME PERCHLORIC ACID SODIUM SALT

CHEMICAL FAMILY .. - SALT FORMULA NACLO4

MOLECULAR WEIGHT .- 122.46

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT

CAS #

APPR %

SODIUM PERCHLORATE

7601-89-0

1.00%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

STRONG OXIDIZER.

HEAT, SHOCK OR CONTACT WITH OTHER MATERIALS MAY CAUSE FIRE OR EXPLOSION. HARMFUL IF SWALLOWED.

IRRITATING TO SKIN, EYES AND MUCOUS MEMBRANES.

APPEARANCE

WHITE, DEL'IQUESCENT, ODORLESS CRYSTALS

POTENTIAL HEALTH EFFECTS -ACUTE AND CHRONIC-

SYMPTOMS OF EXPOSURE-

MSDS -CONTINUED- - SX0692

PAGE # 1

4. FIRST AID MEASURES

EMERGENCY FIRST AIDGET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
SKIN- IMMEDIATELY FLUSH THOROUGHLY WITH LARGE AMOUNTS OF WATER.
EYES- IMMEDIATELY FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15
MINUTES.
INHALATION- REMOVE TO FRESH AIR- GIVE ARTIFICIAL RESPIRATION IF
BREATHING HAS STOPPED.
INGESTION- IF CONSCIOUS, DRINK WATER AND INDUCE VOMITING
IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING
BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

6. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE—
EVACUATE THE AREA OF ALL UNNECESSARY PERSONNEL.

WEAR SUITABLE PROTECTIVE EQUIPMENT LISTED UNDER EXPOSURE /
PERSONAL PROTECTION.

ELIMINATE ANY IGNITION SOURCES UNTIL THE AREA IS DETERMINED TO BE
FREE FROM EXPLOSION OR FIRE HAZARDS.

MSDS —CONTINUED—— SX0692 PAGE # 2



CONTAIN THE RELEASE AND ELIMINATE ITS SOURCE, IF THIS CAN BE DONE WITHOUT RISK.

TAKE UP AND CONTAINERIZE FOR PROPER DISPOSAL AS DESCRIBED UNDER DISPOSAL.

COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS ON REPORTING RELEASES. REFER TO REGULATORY INFORMATION FOR REPORTABLE QUANTITY AND OTHER REGULATORY DATA.

7. HANDLING AND STORAGE

HANDLING & STORAGESTORE IN A COOL PLACE AWAY FROM COMBUSTIBLE AND REDUCING MATERIALS
DO NOT BREATHE DUST.
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT-

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION MATERIAL SHOULD BE HANDLED OR TRANSFERRED IN AN APPROVED FUME HOOD OR WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES SHOULD BE WORN TO PREVENT SKIN CONTACT—NEOPRENE OR EQUIVALENT—

SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES.

RESPIRATORY PROTECTION— IF WORKPLACE EXPOSURE LIMIT—S— OF PRODUCT OR ANY COMPONENT IS EXCEEDED—SEE TLV/PEL—, A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS—NEGATIVE PRESSURE TYPE— UNDER SPECIFIED CONDITIONS—SEE YOUR SAFETY EQUIPMENT SUPPLIER—. ENGINEERING AND/OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

WORK / HYGENIC PRACTICESWASH THOROUGHLY AFTER HANDLING.
DO NOT TAKE INTERNALLY.
EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.

EXPOSURE GUIDELINES

OSHA - PEL-

TWA STEL CL
MSDS -CONTINUED- - SX0692 PAGE # 3

DDIUM PERCHLORATE

ACGIH - TLV-

TWA

STEL

CL

COMPONENT PPM

MG/M3 PPM MG/M3 PPM

MG/M3 SKIN

SODIUM PERCHLORATE

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT -C 760 MMHG-.- DECOMP.

MELTING POINT -C-.... 482C SPECIFIC GRAVITY -H20 - 1-.- 2.02

VAPOR PRESSURE -MM HG-...- N/A 200

PERCENT VOLATILE BY VOL -%-- N/A

VAPOR DENSITY -AIR - 1-...- N/A

EVAPORATION RATE -BUAC - 1-- N/A

SOLUBILITY IN WATER -%-...- SOLUBLE

PPEARANCE

WHITE, DELIQUESCENT, ODORLESS CRYSTALS

10. STABILITY AND REACTIVITY

STABILITY YES HAZARDOUS POLYMERIZATION-DOES NOT OCCUR

HAZARDOUS DECOMPOSITION .-CHLORINE COMPOUNDS, NA20

CONDITIONS TO AVOID....-SEPARATE FROM COMBUSTIBLE, ORGANIC, READILY OXIDIZABLE MATERIALS. ACIDS. SULFUR. CARBONACEOUS MATERIALS AND COTTON.

MATERIALS TO AVOID-

- -WATER

-X-ACIDS

- -BASES

MSDS -CONTINUED- - SX0692 PAGE # 4

- - CORROSIVES
- -OXIDIZERS
- -OTHER -

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA-ORL-RAT LD50- 2100 MG/KG TOXICOLOGICAL FINDINGS-TESTS ON LABORATORY ANIMALS INDICATE MATERIAL MAY PRODUCE ADVERSE MUTAGENIC EFFECTS. CITED IN REGISTRY OF TOXIC EFFECTS OF SUBSTANCES -RTECS-

12. DISPOSAL CONSIDERATIONS

EPA WASTE NUMBERS- DOOL TREATMENT-SPECIFIED TECHNOLOGY - CONTACT YOUR LOCAL PERMITTED WASTE DISPOSAL SITE -TSO- FOR PERMISSIBLE TREATMENT SITES. ALWAYS CONTACT A PERMITTED WASTE DISPOSER -TSD- TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME ...-SODIUM PERCHLORATE DOT ID NUMBER..... UN1502

14. REGULATORY INFORMATION

TSCA INVENTORY THE CAS NUMBER OF THIS PRODUCT IS LISTED ON THE TSCA INVENTORY.

SARA SARA CERCLA COMPONENT EHS EHS TPQ RQ -302--LBS--LBS-

SODIUM PERCHLORATE

MSDS -CONTINUED- - SX0692 PAGE # 5

COMPONENT

SODIUM PERCHLORATE

15. OTHER INFORMATION

COMMENTSNONE
NEPA HAZARD RATINGSHEALTH - 2
FLAMMABILITY - 0
REACTIVITY - 2
SPECIAL HAZARDS- DXY

REVISION HISTORY-02/01/84 10/27/87 06/12/89

- - REVISED SECTION
N/A - NOT AVAILABLE
N/E - NONE ESTABLISHED

THE STATEMENTS CONTAINED HEREIN ARE OFFERED FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED UPON TECHNICAL DATA THAT EM SCIENCE BELIEVES TO BE ACCURATE. IT IS INTENDED FOR USE ONLY BY PERSONS HAVING THE NECESSARY TECHNICAL SKILL AND AT THEIR OWN DESCRETION AND RISK. SINCE CONDITIONS AND MANNER OF USE ARE OUTSIDE OUR CONTROL. WE MAKE NO WARRANTY. EXPRESS OR IMPLIED. OF MERCHANTABILITY. FITNESS OR OTHERWISE.

PORTIONS COPYRIGHT ARIEL RESEARCH CORPORATION, 1991.
RESTRICTED USE CONDITIONS APPLY. SELECTED REGULATORY
INFORMATION IN THIS MSDS HAS BEEN DERIVED FROM ARIEL
RESEARCH CORPORATION'S INTERNATIONAL CHEMICAL REGULATORY
MONITORING SYSTEM -ICRMS-. USE OF THIS DATA IS PROVIDED
SUBJECT TO THE TERMS OF THE LICENSE AGREEMENT BETWEEN EM
INDUSTRIES AND ARIEL RESEARCH CORPORATION. FURTHER
DISTRIBUTION IS PROHIBITED WITHOUT AUTHORIZATION.

MSDS - SX0692

PAGE # 6