

DATE: 08/14/93 ACCT: 888235-01
 INDEX: 05912870140 CAT NO: BP170500 PO NBR: N/A

ACRYLAMIDE
 ACRYLAMIDE
 ACRYLAMIDE

MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC
 CHEMICAL DIVISION
 1 REAGENT LANE
 FAIR LAWN NJ 07410
 (201) 796-7100

EMERGENCY NUMBER: (201) 796-7100
 CHEMTREC ASSISTANCE: (800) 424-9300

THIS INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES.

SUBSTANCE IDENTIFICATION

SUBSTANCE: **ACRYLAMIDE** CAS-NUMBER 79-06-1
 TRADE NAMES/SYNONYMS:
 2-PROPENAMIDE; ACRYLIC AMIDE; ETHYLENECARBOXAMIDE; PROPENAMIDE; VINYL AMIDE;
 RCRA U007; UN 2074; O1065; O1066; BP170; ACC00350

CHEMICAL FAMILY:
 AMIDE

MOLECULAR FORMULA: C3-H5-N-O

MOLECULAR WEIGHT: 71.09

CERCLA RATINGS (SCALE 0-3): HEALTH=3 FIRE=1 REACTIVITY=2 PERSISTENCE=0
 NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=1 REACTIVITY=2

COMPONENTS AND CONTAMINANTS

COMPONENT: ACRYLAMIDE PERCENT: 100
 CAS# 79-06-1

OTHER CONTAMINANTS: POLYMERIZATION INHIBITORS SUCH AS HYDROQUINONE,
 COPPER SULFATE.

EXPOSURE LIMITS:

ACRYLAMIDE:
 0.03 MG/M3 OSHA TWA (SKIN)
 0.03 MG/M3 ACGIH TWA (SKIN)
 ACGIH A2-SUSPECTED HUMAN CARCINOGEN.
 0.03 MG/M3 NIOSH RECOMMENDED TWA (SKIN)

MEASUREMENT METHOD: PARTICULATE FILTER/SILICA GEL TUBE; METHANOL; GAS
 CHROMATOGRAPHY WITH NITROGEN DETECTION; (OSHA # 21).

1000/10,000 POUNDS SARA SECTION 302 THRESHOLD PLANNING QUANTITY
 5000 POUNDS SARA SECTION 304 REPORTABLE QUANTITY
 5000 POUNDS CERCLA SECTION 103 REPORTABLE QUANTITY
 SUBJECT TO SARA SECTION 313 ANNUAL TOXIC CHEMICAL RELEASE REPORTING
 SUBJECT TO CALIFORNIA PROPOSITION 65 CANCER AND/OR REPRODUCTIVE TOXICITY
 WARNING AND RELEASE REQUIREMENTS- (JANUARY 1, 1990)

**OSHA REVOKED THE FINAL RULE LIMITS OF JANUARY 19, 1989 IN RESPONSE TO THE
 11TH CIRCUIT COURT OF APPEALS DECISION (AFL-CIO V. OSHA) EFFECTIVE
 JUNE 30, 1993. SEE 29 CFR 1910.1000 (58 FR 35338)**

PHYSICAL DATA

DESCRIPTION: ODORLESS, COLORLESS TO WHITE LEAFLETS OR FLAKE-LIKE CRYSTALS
 OR POWDER. BOILING POINT: 257 F (125 C) @ 25 MMHG
 MELTING POINT: 184-185 F (84-85 C) SPECIFIC GRAVITY: 1.122
 SOLUBILITY IN WATER: 216% @ 30 C VAPOR DENSITY: 2.4
 SOLVENT SOLUBILITY: SOLUBLE IN ETHANOL, ACETONE, CHLOROFORM, ETHYL ACETATE,
 METHANOL, DIMETHYL SULFOXIDE, ETHER; SLIGHTLY SOLUBLE IN BENZENE, HEPTANE
 PH: 6.0-7.0 (10% 0.1 N NA CL SOLUTION)
 VAPOR PRESSURE: 1.6 MMHG @ 84.5 C; 0.007 MMHG @ 20 C

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:

DATE: 08/14/93 ACCT: 888235-01
 INDEX: 05912870140 CAT NO: BP170500 PO NBR: N/A

SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FLASH POINT: 280 F (138 C) AUTOIGNITION TEMP.: 795 F (424 C)

FLAMMABILITY CLASS(OSHA): IIIB

FIREFIGHTING MEDIA:
 DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM
 (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM
 (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

FIREFIGHTING:
 MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. DO NOT SCATTER
 SPILLED MATERIAL WITH HIGH-PRESSURE WATER STREAMS. DIKE FIRE-CONTROL WATER FOR
 LATER DISPOSAL (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE
 PAGE 31).

USE AGENTS SUITABLE FOR TYPE OF SURROUNDING FIRE. AVOID BREATHING HAZARDOUS
 VAPORS, KEEP UPWIND.

TRANSPORTATION DATA

FINAL RULE ON HAZARDOUS MATERIALS REGULATIONS (HMR, 49 CFR PARTS 171-180),
 DOCKET NUMBERS HM-181, HM-181A, HM-181B, HM-181C, HM-181D AND HM-204.
 EFFECTIVE DATE OCTOBER 1, 1991. HOWEVER, COMPLIANCE WITH THE REGULATIONS IS
 AUTHORIZED ON AND AFTER JANUARY 1, 1991. (55 FR 52402, 12/21/90)

EXCEPT FOR EXPLOSIVES, INHALATION HAZARDS, AND INFECTIOUS SUBSTANCES, THE
 EFFECTIVE DATE FOR HAZARD COMMUNICATION REQUIREMENTS IS EXTENDED TO
 OCTOBER 1, 1993. (56 FR 47158, 09/18/91)

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING NAME-ID NUMBER, 49 CFR 172.101:
 ACRYLAMIDE-UN 2074

U.S. DEPARTMENT OF TRANSPORTATION HAZARD CLASS OR DIVISION, 49 CFR 172.101:
 6.1 - POISONOUS MATERIALS

U.S. DEPARTMENT OF TRANSPORTATION PACKING GROUP, 49 CFR 172.101:
 PG III

U.S. DEPARTMENT OF TRANSPORTATION LABELING REQUIREMENTS, 49 CFR 172.101
 AND SUBPART E:
 KEEP AWAY FROM FOOD

U.S. DEPARTMENT OF TRANSPORTATION PACKAGING AUTHORIZATIONS:
 EXCEPTIONS: 49 CFR 173.153
 NON-BULK PACKAGING: 49 CFR 173.213
 BULK PACKAGING: 49 CFR 173.240

U.S. DEPARTMENT OF TRANSPORTATION QUANTITY LIMITATIONS 49 CFR 172.101:
 PASSENGER AIRCRAFT OR RAILCAR: 100 KG
 CARGO AIRCRAFT ONLY: 200 KG

TOXICITY

ACRYLAMIDE:
 IRRITATION DATA: 50 MG/3 DAYS SKIN-RABBIT MILD; 500 MG/24 HOURS
 SKIN-RABBIT MILD; 10 MG/30 SECONDS RINSED EYE-RABBIT MILD; 100 MG/24 HOURS
 EYE-RABBIT MODERATE
 TOXICITY DATA: 400 MG/KG SKIN-RAT LD50; 1000 MG/KG SKIN-RABBIT LD50; 124 MG/KG
 ORAL-RAT LD50; 107 MG/KG ORAL-MOUSE LD50; 150 MG/KG ORAL-RABBIT LD50;
 150 MG/KG ORAL-GUINEA PIG LD50; 100 MG/KG ORAL-MAMMAL LD50; 1800 MG/KG
 90 DAYS CONTINUOUS ORAL-RAT TDLO; 568 MG/KG/8 WEEKS INTERMITTENT ORAL-MOUSE
 TDLO; 671 MG/KG/75 WEEKS INTERMITTENT ORAL-MONKEY TDLO; 771 MG/KG/1 YEAR
 INTERMITTENT ORAL-CAT TDLO; 170 MG/KG SUBCUTANEOUS-GUINEA PIG LD50;
 190 MG/KG INTRAVENOUS-MAMMAL LDLO; 90 MG/KG INTRAPERITONEAL-RAT LD50;
 170 MG/KG INTRAPERITONEAL-MOUSE LD50; 156 MG/KG UNREPORTED-MOUSE LD50;
 173 MG/KG UNREPORTED-GUINEA PIG LD50; 208 MG/KG UNREPORTED-RAT LD50;
 280 MG/KG UNREPORTED-RABBIT LD50; MUTAGENIC DATA (RTECS); REPRODUCTIVE
 EFFECTS DATA (RTECS); TUMORIGENIC DATA (RTECS).
 CARCINOGEN STATUS: ANTICIPATED HUMAN CARCINOGEN (NTP); ANIMAL SUFFICIENT
 EVIDENCE (IARC GROUP-2B). INTRAGASTRIC OR INTRAPERITONEAL ADMINISTRATION
 TO MICE CAUSED INCREASED INCIDENCE OF LUNG ADENOMAS. ORAL ADMINISTRATION
 TO RATS INCREASED THE INCIDENCES OF NEOPLASMS AT SEVERAL SITES INCLUDING
 THE THYROID GLAND, SCROTUM, MAMMARY GLAND, ORAL CAVITY, UTERUS, AND THE
 ADRENAL, CLITORAL AND PITUITARY GLAND. ACRYLAMIDE SHOWED INITIATING ACTIVITY
 TO THE SKIN OF FEMALE MICE AFTER ORAL, TOPICAL OR INTRAPERITONEAL
 ADMINISTRATION FOLLOWED BY CHRONIC TOPICAL TREATMENT WITH
 12-O-TETRA-DECANOLPHORBOL 13-ACETATE.
 LOCAL EFFECTS: IRRITANT- SKIN, EYE.
 ACUTE TOXICITY LEVEL: TOXIC BY DERMAL ABSORPTION AND INGESTION.
 TARGET EFFECTS: NEUROTOXIN.
 AT INCREASED RISK FROM EXPOSURE: PERSONS WITH PRE-EXISTING SKIN DISORDERS,
 EYE PROBLEMS, AND/OR CENTRAL OR PERIPHERAL NERVOUS SYSTEM CONDITIONS.
 ADDITIONAL DATA: ALCOHOL MAY ENHANCE THE TOXIC EFFECTS.

HEALTH EFFECTS AND FIRST AID

INHALATION:
ACRYLAMIDE:
NEUROTOXIN

ACUTE EXPOSURE- MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT. IF SUFFICIENT AMOUNTS OF ACRYLAMIDE ARE INHALED, SYSTEMIC TOXICITY, AS DETAILED IN ACUTE SKIN CONTACT, MAY OCCUR. SEIZURES WERE REPORTED IN ANIMALS EXPOSED TO ACRYLAMIDE.
CHRONIC EXPOSURE- PROLONGED OR REPEATED EXPOSURE TO LOW CONCENTRATIONS MAY CAUSE SYMPTOMS DETAILED IN CHRONIC SKIN CONTACT. HISTOPATHOLOGIC STUDIES OF ANIMALS HAVE REPORTED DEGENERATION OF THE AXON AND MYELIN SHEATHS.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. KEEP PERSON WARM AND AT REST. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

ACRYLAMIDE:

IRRITANT/NEUROTOXIN/TOXIC.

ACUTE EXPOSURE- THE LETHAL DOSE REPORTED IN RATS WAS 400 MG/KG. DIRECT CONTACT MAY CAUSE IRRITATION WITH REDNESS AND BLISTERING. ACRYLAMIDE MAY BE ABSORBED THROUGH THE SKIN TO CAUSE INJURY TO THE CENTRAL, PERIPHERAL AND AUTONOMIC NERVOUS SYSTEMS. EFFECTS MAY INCLUDE ENCEPHALOPATHY WITH CONFUSION, DISORIENTATION, MEMORY DISTURBANCES, HALLUCINATIONS, ATAXIA, AND MILD PERIPHERAL NEUROPATHY. NEUROLOGIC EFFECTS MAY BE RECALLED WITH SUBSEQUENT EXPOSURE TO LESSER AMOUNTS OF ACRYLAMIDE. PERMANENT NEUROLOGIC SEQUALAE MAY OCCUR AFTER SEVERE POISONING.
CHRONIC EXPOSURE- REPEATED AND PROLONGED EXPOSURE MAY CAUSE DERMATITIS AS WELL AS THE SYMPTOMS DETAILED IN ACUTE EXPOSURE. POLYNEURITIS WITH SENSORY CHANGES IN THE LIMBS, NUMBNESS OF THE EXTREMITIES, MUSCLE PAIN, INCOORDINATION, TREMORS, POSITIVE ROMBERG SIGN, ABSENCE OF DEEP TENDON REFLEXES, SECONDARY MUSCLE ATROPHY MAY OCCUR. SLURRED SPEECH, NYSTAGMUS, CHANGES IN THE VISUAL FIELDS, DRIPPING, COLD, AND PEELING HANDS AND FEET, BLUISH-RED SKIN DISCOLORATION, WEIGHT LOSS, AND DIFFICULTIES IN URINATION AND DEFECATION MAY ALSO RESULT. SYMPTOMS MAY BE DELAYED FOR MONTHS TO YEARS FOLLOWING EXPOSURE. SKIN SENSITIZATION HAS BEEN REPORTED IN GUINEA PIGS. DERMAL ABSORPTION STUDIES USING MICE SHOWED A SIGNIFICANT INCREASE IN THE NUMBER OF DEAD EMBRYOS IN FEMALES MATED WITH MALES EXPOSED TO 125, 100, 75 AND 50 MG/KG DAY FOR 5 CONSECUTIVE DAYS. NO SIGNIFICANT CHANGES RESULTED IN THE NUMBER OF LIVING EMBRYOS PER FEMALE IN THOSE MATED WITH MALES EXPOSED TO 25 MG/KG DAY.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:

ACRYLAMIDE:

IRRITANT.

ACUTE EXPOSURE- DIRECT CONTACT MAY CAUSE IRRITATION AND POSSIBLY BURNS. A 10% AQUEOUS SOLUTION APPLIED IN RABBIT EYES CAUSED SLIGHT PAIN AND CONJUNCTIVAL IRRITATION; A 40% SOLUTION FOR 30 SECONDS CAUSED MORE PAIN; AND A 40% SOLUTION APPLIED AND NOT RINSED CAUSED SUPERFICIAL CORNEAL INJURY, BUT THE CORNEA WAS CLEAR IN 24 HOURS.
CHRONIC EXPOSURE- PROLONGED OR REPEATED CONTACT WITH IRRITANTS MAY CAUSE CONJUNCTIVITIS. APPLICATION OF 0.1 ML OF A 50% AQUEOUS SOLUTION FOR 10 DAYS RESULTED IN ONE OF SIX RABBITS DEVELOPING THE CHARACTERISTIC MOTOR SYNDROME OF ACRYLAMIDE INTOXICATION.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

ACRYLAMIDE:

NEUROTOXIN/CARCINOGEN/TOXIC.

ACUTE EXPOSURE- THE REPORTED LETHAL DOSE IN RATS WAS 124 MG/KG. INGESTION MAY CAUSE SYSTEMIC TOXICITY AS DETAILED IN ACUTE SKIN CONTACT. IN ANIMALS, SINGLE DOSES OF 20-252 MG/KG CAUSED WEIGHT LOSS, TREMORS, AND PUPIL DILATION. REPRODUCTIVE EFFECTS HAVE BEEN REPORTED IN ANIMALS.
CHRONIC EXPOSURE- INGESTION BY HUMANS RESULTED IN SYMPTOMS DETAILED IN CHRONIC SKIN CONTACT. RHINORRHEA, COUGHING, DIZZINESS, SLEEPINESS, AND IRRATIONAL BEHAVIOR ALSO OCCURRED. REPRODUCTIVE EFFECTS INCLUDING TESTICULAR ATROPHY, REDUCED FERTILITY AND PRE- AND POST-IMPLANTATION MORTALITY HAVE BEEN REPORTED IN ANIMALS. REPEATED INGESTION OF ACRYLAMIDE IN DRINKING WATER OF RATS INDUCED AN INCREASED INCIDENCE OF BENIGN OR MALIGNANT NEOPLASMS AT SEVERAL SITES, INCLUDING THYROID GLAND, MAMMARY GLAND, SCROTUM, ORAL CAVITY, AND ADRENAL GLAND. REPEATED INTRAGASTRIC ADMINISTRATION TO MICE CAUSED AN INCREASED INCIDENCE OF LUNG ADENOMAS.

FIRST AID- REMOVE BY GASTRIC LAVAGE OR EMESIS. MAINTAIN BLOOD PRESSURE AND AIRWAY. GIVE OXYGEN IF RESPIRATION IS DEPRESSED. DO NOT PERFORM GASTRIC LAVAGE OR EMESIS IF VICTIM IS UNCONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY (DREISBACH, HANDBOOK OF POISONING, 12TH ED.). ADMINISTRATION OF GASTRIC LAVAGE OR OXYGEN SHOULD BE PERFORMED BY QUALIFIED MEDICAL

PERSONNEL.

ANTIDOTE:
NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY

REACTIVITY:
ACRYLAMIDE:
MAY POLYMERIZE VIOLENTLY ABOVE THE MELTING POINT OR WHEN EXPOSED TO ULTRAVIOLET LIGHT.

INCOMPATIBILITIES:

ACRYLAMIDE:

ACIDS: INCOMPATIBLE.
ALKALI: INCOMPATIBLE.
ALUMINUM: INCOMPATIBLE.
BRASS: INCOMPATIBLE.
BRONZE: INCOMPATIBLE.
COPPER: INCOMPATIBLE.
OXIDIZERS (STRONG): FIRE AND EXPLOSION HAZARD.
REDUCING AGENTS: FIRE AND EXPLOSION HAZARD.

DECOMPOSITION:

THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE CORROSIVE FUMES OF AMMONIA, AND TOXIC OXIDES OF NITROGEN AND CARBON.

POLYMERIZATION:

READILY POLYMERIZES AT THE MELTING POINT (84-85 C) OR UNDER ULTRAVIOLET LIGHT.

STORAGE AND DISPOSAL

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING OF THIS SUBSTANCE.

STORAGE

STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

THRESHOLD PLANNING QUANTITY (TPQ):
THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) SECTION 302 REQUIRES THAT EACH FACILITY WHERE ANY EXTREMELY HAZARDOUS SUBSTANCE IS PRESENT IN A QUANTITY EQUAL TO OR GREATER THAN THE TPQ ESTABLISHED FOR THAT SUBSTANCE NOTIFY THE STATE EMERGENCY RESPONSE COMMISSION FOR THE STATE IN WHICH IT IS LOCATED. SECTION 303 OF SARA REQUIRES THESE FACILITIES TO PARTICIPATE IN LOCAL EMERGENCY RESPONSE PLANNING (40 CFR 355.30).

CONDITIONS TO AVOID

MAY BURN BUT DOES NOT IGNITE READILY. CONTAINERS MAY EXPLODE IN HEAT OF FIRE.

SPILL AND LEAK PROCEDURES

WATER SPILL:

THE CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65) PROHIBITS CONTAMINATING ANY KNOWN SOURCE OF DRINKING WATER WITH SUBSTANCES KNOWN TO CAUSE CANCER AND/OR REPRODUCTIVE TOXICITY.

OCCUPATIONAL SPILL:

DO NOT TOUCH SPILLED MATERIAL. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. USE WATER SPRAY TO REDUCE VAPORS. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. FOR SMALL DRY SPILLS, WITH A CLEAN SHOVEL PLACE MATERIAL INTO CLEAN, DRY CONTAINERS AND COVER. MOVE CONTAINERS FROM SPILL AREA. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY. VENTILATE CLOSED SPACES BEFORE ENTERING.

REPORTABLE QUANTITY (RQ): 5000 POUNDS

THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) SECTION 304 REQUIRES THAT A RELEASE EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY FOR THIS SUBSTANCE BE IMMEDIATELY REPORTED TO THE LOCAL EMERGENCY PLANNING COMMITTEE AND THE STATE EMERGENCY RESPONSE COMMISSION (40 CFR 355.40). IF THE RELEASE OF THIS SUBSTANCE IS REPORTABLE UNDER CERCLA SECTION 103, THE NATIONAL RESPONSE CENTER MUST BE NOTIFIED IMMEDIATELY AT (800) 424-8802 OR (202) 426-2675 IN THE METROPOLITAN WASHINGTON, D.C. AREA (40 CFR 302.6).

PROTECTIVE EQUIPMENT

VENTILATION:
PROVIDE LOCAL EXHAUST OR PROCESS ENCLOSURE VENTILATION TO MEET THE PUBLISHED EXPOSURE LIMITS. VENTILATION EQUIPMENT MUST BE EXPLOSION-PROOF.

RESPIRATOR:

DATE: 08/14/93
INDEX: 05912870140

ACCT: 888235-01
CAT NO: BP170500

PAGE: 5

PO NBR: N/A

THE FOLLOWING RESPIRATORS AND MAXIMUM USE CONCENTRATIONS ARE RECOMMENDATIONS BY THE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, NIOSH POCKET GUIDE TO CHEMICAL HAZARDS; NIOSH CRITERIA DOCUMENTS OR BY THE U.S. DEPARTMENT OF LABOR, 29 CFR 1910 SUBPART Z.
THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED ON CONTAMINATION LEVELS FOUND IN THE WORK PLACE, MUST NOT EXCEED THE WORKING LIMITS OF THE RESPIRATOR AND BE JOINTLY APPROVED BY THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINE SAFETY AND HEALTH ADMINISTRATION (NIOSH-MSHA).

ACRYLAMIDE:

AT ANY DETECTABLE CONCENTRATION:

ANY SELF-CONTAINED BREATHING APPARATUS THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.
ANY SUPPLIED-AIR RESPIRATOR THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND MODE IN COMBINATION WITH AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

ESCAPE- ANY AIR-PURIFYING, FULL-FACEPIECE RESPIRATOR (GAS MASK) WITH A CHIN-STYLE, FRONT- OR BACK-MOUNTED ORGANIC VAPOR CANISTER.
ANY APPROPRIATE ESCAPE-TYPE, SELF-CONTAINED BREATHING APPARATUS.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

ANY SELF-CONTAINED BREATHING APPARATUS THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

ANY SUPPLIED-AIR RESPIRATOR THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE IN COMBINATION WITH AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

CLOTHING:

EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT TO PREVENT REPEATED OR PROLONGED SKIN CONTACT WITH THIS SUBSTANCE.

GLOVES:

EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT WITH THIS SUBSTANCE.

EYE PROTECTION:

EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES TO PREVENT EYE CONTACT WITH THIS SUBSTANCE.

EMERGENCY EYE WASH: WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES MAY BE EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHOULD PROVIDE AN EYE WASH FOUNTAIN WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

AUTHORIZED - FISHER SCIENTIFIC, INC.
CREATION DATE: 09/07/84 REVISION DATE: 07/14/93

-ADDITIONAL INFORMATION-

THIS INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES.