



CHEMICAL MANUFACTURERS ASSOCIATION

TO: Occupational Safety and Health Committee

SUBJECT: OSHA Proposed Labeling and Hazard
Communications Standard

For your information I am enclosing a copy of the
new Labeling and Hazard Communication Standard received
here at CMA Friday, March 25, 1983.

Tish Baskett

Tish Baskett
Secretary to
Milton Freifeld

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TB:

RECEIVED
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A. E. GREENE

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March 21, 1983

Rec'd OSHA 3/25/83

*****ENVIRONMENTAL HEALTH NEWS*****

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* —————> NEW OSHA PROPOSED LABELING AND HAZARD
COMMUNICATION STANDARD NOW AVAILABLE IN FULL TEXT FORM
(40 PAGES OF DOUBLE-SPACED TYPED COPY) ITEM NO. 543

NEWS ITEMS SINCE YOU LAST ACCESSED THIS SERVICE:

HEADLINES, ITEMS, KEY-WORD-SEARCH, HELP, OR QUIT? ITEMS

ITEM NUMBER(S) DESIRED? 543

NEWS ITEM 543:

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THIS DRAFT IS NOT FINAL AND BEARS NO
OFFICIAL ENDORSEMENT. IT SHOULD NOT
BE REPORTED UPON AS OFFICIAL OSHA POLICY. // *

V. AUTHORITY, SIGNATURE AND THE STANDARD
THIS DOCUMENT WAS PREPARED UNDER THE DIRECTION OF THOMAS G. MÜCHTER,
ASSISTANT SECRETARY OF LABOR FOR OCCUPATIONAL SAFETY AND HEALTH, U.S. DEPARTMENT
OF LABOR, 200 CONSTITUTION AVENUE, N.W., WASHINGTON, D.C. 20210. PURSUANT TO.

AP00004565

SECTIONS 6(B) AND 8(G) OF THE ACT, 29 CFR IS HEREBY AMENDED BY ADDING A NEW SECTION 1910.1200 AS SET FORTH BELOW.

LIST OF SUBJECTS IN 29 CFR PART 1910

OCCUPATIONAL SAFETY AND HEALTH, HAZARD COMMUNICATION.

(SEC. 6(B), 8(G), AND 8(G)). PUB. L. 91-596, 84 STAT. 1593.

1599, 1600; 19 U.S.C., 655, 657; 29 CFR PART 1911;

SECRETARY OF LABOR'S ORDER NO. 9-76 (41 FR 25059))

PART 1910 OF TITLE 29 OF THE CODE OF FEDERAL REGULATIONS (CFR) IS HEREBY AMENDED BY ADDING A NEW SECTION WHICH READS AS FOLLOWS:

1910.1200 HAZARD COMMUNICATION.

NEW

(A) PURPOSE. THE PURPOSE OF THIS SECTION IS TO ENSURE THAT THE HAZARDS OF ALL CHEMICALS PRODUCED, IMPORTED, OR USED WITHIN THE MANUFACTURING SECTOR ARE EVALUATED, AND THAT INFORMATION CONCERNING THESE HAZARDS IS TRANSMITTED TO AFFECTED EMPLOYERS AND EMPLOYEES. THIS TRANSMITTAL OF INFORMATION IS TO BE ACCOMPLISHED BY MEANS OF COMPREHENSIVE HAZARD COMMUNICATION PROGRAMS, WHICH ARE TO INCLUDE CONTAINER LABELING, MATERIAL SAFETY DATA SHEETS AND EMPLOYEE TRAINING.

THIS OCCUPATIONAL SAFETY AND HEALTH STANDARD IS INTENDED TO OCCUPY THE FIELD IN TERMS OF COMMUNICATING HAZARDS TO EMPLOYEES IN THE MANUFACTURING SECTOR. ANY STATE WHICH DESIRES TO ASSUME RESPONSIBILITY IN THIS AREA MAY ONLY DO SO UNDER THE PROVISIONS OF 18(B) OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (P.L. 91-596, 84 STAT. 1608) WHICH DEALS WITH STATE PLANS.

(B) SCOPE AND APPLICATION. (I) THIS SECTION REQUIRES CHEMICAL MANUFACTURERS OR IMPORTERS TO ASSESS THE HAZARDS OF CHEMICALS WHICH THEY PRODUCE OR IMPORT, AND ALL EMPLOYERS IN SIC CODES 20 THROUGH 39 (DIVISION D, STANDARD INDUSTRIAL CLASSIFICATION MANUAL) TO PROVIDE INFORMATION TO THEIR EMPLOYEES ABOUT THE HAZARDOUS CHEMICALS WHICH THEY USE, BY MEANS OF A HAZARD COMMUNICATION PROGRAM LABELS, PLACARDS, MATERIAL SAFETY DATA SHEETS, AND INFORMATION AND TRAINING. IN ADDITION, THIS SECTION REQUIRES DISTRIBUTORS TO TRANSMIT THE REQUIRED INFORMATION TO MANUFACTURING PURCHASERS.

(2) THIS SECTION APPLIES TO ANY CHEMICAL WHICH IS KNOWN TO BE PRESENT IN THE WORKPLACE IN SUCH A MANNER THAT EMPLOYEES MAY BE EXPOSED UNDER NORMAL CONDITIONS OF USE OR IN A FORESEEABLE EMERGENCY.

(3) THIS SECTION APPLIES TO LABORATORIES AS FOLLOWS:

(I) EMPLOYERS SHALL ENSURE THAT EXISTING LABELS ON INCOMING CONTAINERS OF HAZARDOUS CHEMICALS ARE NOT REMOVED OR DEFACED;

(II) EMPLOYERS SHALL MAINTAIN ANY MATERIAL SAFETY DATA SHEETS THAT ARE RECEIVED WITH INCOMING SHIPMENTS OF HAZARDOUS CHEMICALS, AND ENSURE THEY ARE ACCESSIBLE TO LABORATORY EMPLOYEES;

(III) EMPLOYERS SHALL ENSURE THAT LABORATORY EMPLOYEES ARE APPRISED OF THE HAZARDS OF THE CHEMICALS IN THEIR WORKPLACES IN ACCORDANCE WITH PARAGRAPH (H) OF THIS SECTION; AND

(IV) EMPLOYERS NEED NOT IMPLEMENT ANY OTHER PROVISIONS OF THIS SECTION IN THEIR LABORATORIES.

(4) THIS SECTION DOES NOT APPLY TO CHEMICALS WHICH ARE FOODS, DRUGS, COSMETICS, OR TOBACCO PRODUCTS INTENDED FOR PERSONAL CONSUMPTION BY EMPLOYEES WHILE IN THE WORKPLACE.

(5) THIS SECTION DOES NOT APPLY TO:

(I) ANY HAZARDOUS WASTE AS SUCH TERM IS DEFINED BY THE SOLID WASTE DISPOSAL ACT, AS AMENDED BY THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED (42 U.S.C. 6901 ET SEQ.), WHEN SUBJECT TO THE LABELING REQUIREMENTS OF THAT ACT AND REGULATIONS ISSUED UNDER THAT ACT BY THE ENVIRONMENTAL PROTECTION AGENCY;

(II) ANY PESTICIDE AS SUCH TERM IS DEFINED IN THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (7 U.S.C. 136 ET SEQ.), WHEN SUBJECT TO THE LABELING REQUIREMENTS OF THAT ACT AND REGULATIONS ISSUED UNDER THAT ACT BY THE ENVIRONMENTAL PROTECTION AGENCY;

(III) ANY FOOD, FOOD ADDITIVE, DRUG, OR COSMETIC, (E.G., FLAVORS AND FRAGRANCES), AS SUCH TERMS ARE DEFINED IN THE FEDERAL FOOD, DRUG, AND COSMETIC ACT (21 U.S.C. 301 ET SEQ.) AND REGULATIONS ISSUED UNDER THAT ACT, WHEN THEY ARE INTENDED FOR USE AS OR IN A FOOD, FOOD ADDITIVE, DRUG, OR COSMETIC, AND WHEN PRESENT IN QUANTITIES OR CONCENTRATIONS WHICH ARE NOT HAZARDOUS TO EMPLOYEES UNDER CONDITIONS OF NORMAL EXPOSURE OR USE, INCLUDING

Replaces

number (A)(5)

FORESEEABLE EMERGENCIES:

(IV) ANY DISTILLED SPIRITS, WINE, OR MALT BEVERAGE AS SUCH TERMS ARE DEFINED IN THE FEDERAL ALCOHOL ADMINISTRATION ACT (27 U.S.C. 201 ET SEQ.) AND REGULATIONS ISSUED UNDER THAT ACT;

(V) ANY CONSUMER PRODUCT OR HAZARDOUS SUBSTANCE AS THOSE TERMS ARE DEFINED IN THE CONSUMER PRODUCT SAFETY ACT (15 U.S.C. 2051 ET SEQ.) AND FEDERAL HAZARDOUS SUBSTANCES ACT (15 U.S.C. 1261 ET SEQ.) RESPECTIVELY, WHEN SUBJECT TO A CONSUMER PRODUCT SAFETY STANDARD OR LABELING REQUIREMENT OF THOSE ACTS, OR REGULATIONS ISSUED UNDER THOSE ACTS BY THE CONSUMER PRODUCT SAFETY COMMISSION, AND WHEN PRESENT IN QUANTITIES OR CONCENTRATIONS WHICH ARE NOT HAZARDOUS TO EMPLOYEES UNDER CONDITIONS OF NORMAL EXPOSURE OR USE, INCLUDING FORESEEABLE EMERGENCIES;

(VI) TOBACCO OR TOBACCO PRODUCTS;

(VII) WOOD OR WOOD PRODUCTS (INCLUDING PRESERVED WOOD); AND

(VIII) ANY ARTICLE.

(C) DEFINITIONS.

/ARTICLE/ MEANS A MANUFACTURED ITEM (I) WHICH IS FORMED TO A SPECIFIC SHAPE OR DESIGN DURING MANUFACTURE, (II) WHICH HAS END USE FUNCTION(S) DEPENDENT IN WHOLE OR IN PART UPON ITS SHAPE OR DESIGN DURING END USE, AND (III) WHICH DOES NOT RELEASE, OR OTHERWISE RESULT IN EXPOSURE TO, A HAZARDOUS CHEMICAL UNDER NORMAL CONDITIONS OF USE.

/ASSISTANT SECRETARY/ MEANS THE ASSISTANT SECRETARY OF LABOR FOR OCCUPATIONAL SAFETY AND HEALTH, U.S. DEPARTMENT OF LABOR, OR DESIGNEE.

/CHEMICAL/ MEANS ANY ELEMENT, CHEMICAL COMPOUND OR MIXTURE OF ELEMENTS AND/OR COMPOUNDS.

/CHEMICAL MANUFACTURER/ IS AN EMPLOYER IN SIC CODES 20 THROUGH 39 WITH A FACILITY WHERE CHEMICAL(S) ARE PRODUCED OR PROCESSED FOR USE OR DISTRIBUTION.

/CHEMICAL NAME/ IS THE SCIENTIFIC DESIGNATION OF A CHEMICAL IN ACCORDANCE WITH THE NOMENCLATURE SYSTEM DEVELOPED BY THE INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY (IUPAC) OR THE CHEMICAL ABSTRACTS SERVICE (CAS) RULES OF NOMENCLATURE, OR A NAME WHICH WILL CLEARLY IDENTIFY THE CHEMICAL FOR HAZARD EVALUATION PURPOSES.

/COMBUSTIBLE LIQUID/ MEANS ANY LIQUID HAVING A FLASHPOINT AT OR ABOVE 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE), BUT BELOW 200 DEGREES FAHRENHEIT (93.3 DEGREES CENTIGRADE), EXCEPT ANY MIXTURE HAVING COMPONENTS WITH FLASHPOINTS OF 200 DEGREES FAHRENHEIT (93.3 DEGREES CENTIGRADE), OR HIGHER, THE TOTAL VOLUME OF WHICH MAKE UP 99 PERCENT OR MORE OF THE TOTAL VOLUME OF THE MIXTURE.

/COMMON NAME/ MEANS ANY DESIGNATION OR IDENTIFICATION SUCH AS CODE NAME, CODE NUMBER, TRADE NAME, BRAND NAME OR GENERIC NAME USED TO IDENTIFY A CHEMICAL OTHER THAN BY ITS CHEMICAL NAME.

/COMPRESSED GAS/ MEANS:

(I) A GAS OR MIXTURE OF GASES HAVING, IN A CONTAINER, AN ABSOLUTE PRESSURE EXCEEDING 40 PSI AT 70 DEGREES FAHRENHEIT (21.1 DEGREES CENTIGRADE); OR

(II) A GAS OR MIXTURE OF GASES HAVING, IN A CONTAINER, AN ABSOLUTE PRESSURE EXCEEDING 104 PSI AT 130 DEGREES FAHRENHEIT (54.4 DEGREES CENTIGRADE) REGARDLESS OF THE PRESSURE AT 70 DEGREES FAHRENHEIT (21.1 DEGREES CENTIGRADE); OR

(III) A LIQUID HAVING A VAPOR PRESSURE EXCEEDING 40 PSI AT 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE) AS DETERMINED BY ASTM D-323-72.

/CONTAINER/ MEANS ANY BAG, BARREL, BOTTLE, BOX, CAN, CYLINDER, DRUM, REACTION VESSEL, STORAGE TANK, OR THE LIKE THAT CONTAINS A HAZARDOUS CHEMICAL. FOR PURPOSES OF THIS SECTION, PIPES OR PIPING SYSTEMS ARE NOT CONSIDERED TO BE CONTAINERS.

/DESIGNATED REPRESENTATIVE/ MEANS ANY INDIVIDUAL OR ORGANIZATION TO WHOM AN EMPLOYEE OR FORMER EMPLOYEE GIVES WRITTEN AUTHORIZATION TO EXERCISE SUCH EMPLOYEE'S RIGHTS UNDER THIS SECTION. A RECOGNIZED OR CERTIFIED COLLECTIVE BARGAINING AGENT SHALL BE TREATED AUTOMATICALLY AS A DESIGNATED REPRESENTATIVE WITHOUT REGARD TO WRITTEN EMPLOYEE AUTHORIZATION.

/DIRECTOR/ MEANS THE DIRECTOR, NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, OR DESIGNEE.

/DISTRIBUTOR/ MEANS A BUSINESS WHICH SUPPLIES OR SELLS CONTAINERS OF HAZARDOUS CHEMICALS TO MANUFACTURING PURCHASERS.

/EMPLOYEE/ MEANS A WORKER WHO MAY BE EXPOSED UNDER NORMAL OPERATING CONDITIONS

OR FORESEEABLE ENERGIES TO HAZARDOUS CHEMICALS IN A WORKPLACE IN SIC CODES 20 THROUGH 39, INCLUDING, BUT NOT LIMITED TO PRODUCTION WORKERS, LINE SUPERVISORS, AND REPAIR OR MAINTENANCE PERSONNEL, OFFICE WORKERS, ROOMS MAINTENANCE PERSONNEL, SECURITY PERSONNEL, OR NON-RESIDENT MANAGEMENT ARE GENERALLY NOT INCLUDED, UNLESS THEIR JOB PERFORMANCE ROUTINELY INVOLVES POTENTIAL EXPOSURE TO HAZARDOUS CHEMICALS.

EMPLOYEE/ MEANS A PERSON ENGAGED IN A BUSINESS WITHIN SIC CODES 20 THROUGH 39 WHERE CHEMICALS ARE EITHER USED, OR ARE PRODUCED OR PROCESSED FOR USE OR DISTRIBUTION.

EXPLOSIVE/ MEANS A CHEMICAL THAT CAUSES A Sudden, MOST INSTANTANEOUS RELEASE OF PRESSURE, GAS, AND HEAT WHEN SUBJECTED TO Sudden SHOCK, PRESSURE, OR HIGH TEMPERATURE.

EXPOSURE/ OR EXPOSED/ MEANS THAT AN EMPLOYEE IS SUBJECTED TO A HAZARDOUS CHEMICAL IN THE COURSE OF EMPLOYMENT THROUGH ANY ROUTE OF ENTRY (INHALATION, INGESTION, SKIN CONTACT OR ABSORPTION, ETC.), AND INCLUDING PAST EXPOSURE AND POTENTIAL (E.G., ACCIDENTAL OR POSSIBLE) EXPOSURE.

FLAMMABLE/ MEANS A CHEMICAL THAT FALLS INTO ONE OF THE FOLLOWING CATEGORIES: (1) /NEBULOSOL, FLAMMABLE/ MEANS A FLAME PROJECTION EXCEEDING 18 INCHES AT DESCRIBED IN 16 CFR 1500.45, YIELDS A FLAME EXTINGUISHING BACK TO THE VALVE) AT ANY DEGREE OF VALVE OPENING;

(11) /GAS, FLAMMABLE/ MEANS: (A) A GAS THAT, AT AMBIENT TEMPERATURE AND PRESSURE, FORMS A FLAMMABLE MIXTURE WITH AIR AT A CONCENTRATION OF THIRTEEN (13) PERCENT BY VOLUME OR LESS; OR (B) A GAS THAT, AT AMBIENT TEMPERATURE AND PRESSURE, FORMS A RANGE OF FLAMMABLE MIXTURES WITH AIR WIDER THAN TWELVE (12) PERCENT BY VOLUME, REGARDLESS OF THE LOWER LIMIT;

(111) /LIQUID, FLAMMABLE/ MEANS ANY LIQUID HAVING A FLASHPOINT BELOW 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE), EXCEPT ANY MIXTURE HAVING COMPONENTS WITH FLASHPOINTS OF 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE) OR HIGHER, THE TOTAL OF WHICH MAKE UP 99 PERCENT OR MORE OF THE TOTAL VOLUME OF THE MIXTURE.

(1V) /SOLID, FLAMMABLE/ MEANS A SOLID, OTHER THAN A BLASTING AGENT OR EXPLOSIVE AS DEFINED IN 1910.109(a), THAT IS LIABLE TO CAUSE FIRE THROUGH FRICTION, ABSORPTION OF MOISTURE, SPONTANEOUS CHEMICAL CHANGE, OR RETAINED HEAT FROM MANUFACTURING OR PROCESSING, OR WHICH CAN BE IGNITED READILY AND WHEN IGNITED BURNS SO VIGOROUSLY AND PERSISTENTLY AS TO CREATE A SERIOUS HAZARD.

A CHEMICAL SHALL BE CONSIDERED TO BE A FLAMMABLE SOLID IF, WHEN TESTED BY THE METHOD DESCRIBED IN 16 CFR 1500.44, IT IGNITES AND BURNS WITH A SELF-SUSTAINED FLAME AT A RATE GREATER THAN ONE-TENTH OF AN INCH PER SECOND ALONG ITS MAJOR AXIS.

FLASHPOINT/ MEANS THE MINIMUM TEMPERATURE AT WHICH A LIQUID GIVES OFF A VAPOR IN SUFFICIENT CONCENTRATION TO IGNITE WHEN TESTED AS FOLLOWS:

(1) /TAGUABLE CLOSED TESTER (SEE AMERICAN NATIONAL STANDARD METHOD OF TEST FOR FLASH POINT BY TAG CLOSED TESTER, 211.24-1979 (ASTM D 56-79)) FOR LIQUIDS WITH A VISCOSITY OF LESS THAN 45 SAYBOLT UNIVERSAL SECONDS (SUS) AT 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE), THAT DO NOT CONTAIN SUSPENDED SOLIDS AND DO NOT HAVE A TENDENCY TO FORM A SURFACE FILM UNDER TEST; OR

(11) /PENSKY-MARTENS CLOSED TESTER (SEE AMERICAN NATIONAL STANDARD METHOD OF TEST FOR FLASH POINT BY PENSKY-MARTENS CLOSED TEST, 211.7-1979 (ASTM D 93-79)) FOR LIQUIDS WITH A VISCOSITY EQUAL TO OR GREATER THAN 45 SUS AT 100 DEGREES FAHRENHEIT (37.8 DEGREES CENTIGRADE), OR THAT CONTAIN SUSPENDED SOLIDS, OR THAT HAVE A TENDENCY TO FORM A SURFACE FILM UNDER TEST; OR

(111) /SETFLASH CLOSED TESTER (SEE AMERICAN NATIONAL STANDARD METHOD OF TEST FOR FLASH POINT BY SETFLASH CLOSED TESTER (ASTM D 3278-78)).

ORGANIC PEROXIDES, WHICH UNDERGO AUTOACCELERATING THERMAL DECOMPOSITION, ARE EXCLUDED FROM ANY OF THE FLASHPOINT DETERMINATION METHODS SPECIFIED ABOVE.

POSSIBLE EXPOSURE/ MEANS ANY OCCURRENCE SUCH AS, BUT NOT LIMITED TO, EQUIPMENT FAILURE, Rupture OF CONTAINERS, OR FAILURE OF CONTROL EQUIPMENT WHICH MAY OR DOES RESULT IN AN UNCONTROLLED RELEASE OF A HAZARDOUS CHEMICAL INTO THE WORKPLACE.

HAZARDOUS CHEMICAL/ MEANS ANY CHEMICAL WHICH IS A CORROSIBLE LIQUID, A COMPRESSED GAS, EXPLOSIVE, FLAMMABLE, A HEALTH HAZARD, AN ORGANIC PEROXIDE,

AN OXIDIZER, PYROPHORIC, UNSTABLE (REACTIVE) OR WATER-REACTIVE.

/HAZARD WARNING/ MEANS ANY WORDS, PICTURES, SYMBOLS, OR COMBINATION THEREOF APPEARING ON A LABEL WHICH INSTRUCT EMPLOYEES AS TO IMMEDIATE ACTION THEY SHOULD TAKE FOR THEIR OWN PROTECTION.

/HEALTH HAZARD/ MEANS A CHEMICAL WHICH, UPON EXPOSURE, MAY RESULT IN THE OCCURRENCE OF ACUTE OR CHRONIC HEALTH EFFECTS IN EMPLOYEES. THE TERM /HEALTH HAZARD/ INCLUDES CHEMICALS WHICH ARE CARCINOGENS, REPRODUCTIVE TOXINS, IRRITANTS, CORROSIVES, SENSITIZERS, HEPATOTOXINS, NEPHROTOXINS, NEUROTOXINS, AGENTS WHICH ACT ON THE HEMATOPOIETIC SYSTEM, AGENTS WHICH DAMAGE THE LUNG, CUTANEOUS HAZARDS OR EYE HAZARDS. APPENDIX A PROVIDES FURTHER DEFINITIONS AND EXPLANATIONS OF THE SCOPE OF HEALTH HAZARDS COVERED BY THIS SECTION.

/IDENTITY/ MEANS ANY CHEMICAL OR COMMON NAME WHICH IS INDICATED ON THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THE CHEMICAL. THE IDENTITY USED SHALL PERMIT CROSS-REFERENCES TO BE MADE AMONG THE REQUIRED LIST OF HAZARDOUS CHEMICALS, THE LABEL AND THE MSDS.

/IMMEDIATE USE/ MEANS THAT THE HAZARDOUS CHEMICAL WILL BE UNDER THE CONTROL OF AND USED ONLY BY THE PERSON WHO OBTAINED IT AND ONLY WITHIN THE WORK SHIFT IN WHICH IT IS OBTAINED.

/IMPORTER/ MEANS THE FIRST BUSINESS WITH EMPLOYEES WITHIN THE CUSTOMS TERRITORY OF THE UNITED STATES, WHICH HANDLES CONTAINERS OF HAZARDOUS CHEMICALS PRODUCED IN OTHER COUNTRIES AND INTENDED FOR SALE AND DISTRIBUTION TO MANUFACTURING PURCHASERS WITHIN THE UNITED STATES.

/LABEL/ MEANS WRITTEN, PRINTED, OR GRAPHIC MATERIAL DISPLAYED ON OR AFFIXED TO CONTAINERS OF HAZARDOUS CHEMICALS.

/MANUFACTURING PURCHASER/ MEANS AN EMPLOYER WITH A FACILITY CLASSIFIED IN SIC CODES 20 THROUGH 39 WHO PURCHASES A HAZARDOUS CHEMICAL FOR USE WITHIN THAT FACILITY.

/MATERIAL SAFETY DATA SHEET (MSDS)/ MEANS PRINTED MATERIAL CONCERNING A HAZARDOUS CHEMICAL WHICH IS PREPARED IN ACCORDANCE WITH PARAGRAPH (6) OF THIS SECTION.

/MIXTURE/ MEANS ANY COMBINATION OF TWO OR MORE CHEMICALS IF THE COMBINATION IS NOT, IN WHOLE OR IN PART, THE RESULT OF A CHEMICAL REACTION.

/ORGANIC PEROXIDE/ MEANS AN ORGANIC COMPOUND THAT CONTAINS THE BIVALENT -O-O- STRUCTURE AND WHICH MAY BE CONSIDERED TO BE A STRUCTURAL DERIVATIVE OF HYDROGEN PEROXIDE WHERE ONE OR BOTH OF THE HYDROGEN ATOMS HAS BEEN REPLACED BY AN ORGANIC RADICAL.

/OXIDIZER/ MEANS A CHEMICAL OTHER THAN A BLASTING AGENT OR EXPLOSIVE AS DEFINED IN 1910.109(A), THAT INITIATES OR PROMOTES COMBUSTION IN OTHER MATERIALS, THEREBY CAUSING FIRE EITHER OF ITSELF OR THROUGH THE RELEASE OF OXYGEN OR OTHER GASES.

/PYROPHORIC/ MEANS A CHEMICAL THAT WILL IGNITE SPONTANEOUSLY IN AIR AT A TEMPERATURE OF 130 DEGREES FAHRENHEIT (54.4 DEGREES CENTIGRADE) OR BELOW.

/TRADE SECRET/ MEANS ANY FORMULA, PATTERN, PROCESS, DEVICE, INFORMATION OR COMPILATION OF INFORMATION (INCLUDING CHEMICAL NAME OR OTHER UNIQUE CHEMICAL IDENTIFIER) THAT IS USED IN AN EMPLOYER'S BUSINESS, AND THAT GIVES THE EMPLOYER AN OPPORTUNITY TO OBTAIN AN ADVANTAGE OVER COMPETITORS WHO DO NOT KNOW OR USE IT.

/UNSTABLE (REACTIVE)/ MEANS A CHEMICAL WHICH IN THE PURE STATE, OR AS PRODUCED OR TRANSPORTED, WILL VIGOROUSLY POLYMERIZE, DECOMPOSE, CONDENSE, OR WILL BECOME SELF-REACTIVE UNDER CONDITIONS OF SHOCKS, PRESSURE OR TEMPERATURE.

/USE/ MEANS HANDLE, REACT, PROCESS, PACKAGE OR REPACKAGE, OR TRANSPORT (OTHER THAN THAT TRANSPORTATION UNDER THE JURISDICTION OF THE U.S. DEPARTMENT OF TRANSPORTATION, E.G., WITHIN A PLANT).

/WATER-REACTIVE/ MEANS A CHEMICAL THAT REACTS WITH WATER TO RELEASE A GAS THAT IS EITHER FLAMMABLE OR PRESENTS A HEALTH HAZARD.

/WORK AREA/ MEANS A ROOM OR DEFINED SPACE IN AN ESTABLISHMENT WHERE HAZARDOUS CHEMICALS ARE PRODUCED OR USED, AND WHERE EMPLOYEES ARE PRESENT.

/WORKPLACE/ MEANS AN ESTABLISHMENT AT ONE GEOGRAPHICAL LOCATION CONTAINING ONE OR MORE WORK AREAS.

(D) HAZARD DETERMINATION. (1) CHEMICAL MANUFACTURERS AND IMPORTERS SHALL EVALUATE CHEMICALS PRODUCED IN OR IMPORTED INTO THEIR WORKPLACES TO DETERMINE IF THEY ARE HAZARDOUS. EMPLOYERS MAY RELY ON THE EVALUATION PERFORMED BY THE CHEMICAL MANUFACTURER OR IMPORTER FOR THE PRODUCT TO SATISFY THIS REQUIREMENT.

(2) CHEMICAL MANUFACTURERS, IMPORTERS OR EMPLOYERS EVALUATING CHEMICALS SHALL ENSURE THAT THEY HAVE THOROUGHLY CONSIDERED THE AVAILABLE SCIENTIFICALLY WELL-ESTABLISHED EVIDENCE IN MAKING THEIR HAZARD DETERMINATIONS. THE CHEMICAL MANUFACTURER OR EMPLOYER SHALL ENSURE THAT THE CHEMICAL IS EVALUATED FOR ITS POTENTIAL TO PRESENT ANY OF THE PHYSICAL OR HEALTH HAZARDS COVERED BY THIS SECTION, AND ENUMERATED IN THE DEFINITION FOR A HAZARDOUS CHEMICAL. APPENDICES A AND B ARE MANDATORY, AND ARE TO BE CONSULTED TO IDENTIFY THE SCOPE OF HEALTH HAZARDS COVERED AND THE COMPLETENESS OF EVALUATION EXPECTED.

(3) THE CHEMICAL MANUFACTURER, IMPORTER OR EMPLOYER SHALL TREAT CHEMICALS LISTED IN THE FOLLOWING SOURCES AS BEING HAZARDOUS WHENEVER THEY ARE PRESENT IN THE WORKPLACE:

- (i) 29 CFR PART 1910, SUBPART Z, TOXIC AND HAZARDOUS SUBSTANCES, /GENERAL INDUSTRY STANDARDS/, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION; AND
- (ii) /THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORK ENVIRONMENT/, AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (LATEST EDITION).

THE CHEMICAL MANUFACTURER, IMPORTER, OR EMPLOYER IS STILL RESPONSIBLE FOR EVALUATING THE SPECIFIC HAZARDS ASSOCIATED WITH THE CHEMICALS IN THESE SOURCE LISTS.

(4) CHEMICAL MANUFACTURERS AND IMPORTERS SHALL INFORM DOWNSTREAM EMPLOYERS WHEN A CHEMICAL HAS BEEN IDENTIFIED AS A CARCINOGEN IN ONE OF THE FOLLOWING SOURCES:

- (i) NATIONAL TOXICOLOGY PROGRAM (NTP), /ANNUAL REPORT ON CARCINOGENS/ (LATEST EDITION); OR
- (ii) INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) /MONOGRAPHS/ (LATEST EDITIONS).

CHEMICAL MANUFACTURERS, IMPORTERS AND EMPLOYERS SHALL NOTE THIS INFORMATION ON THE MATERIAL SAFETY DATA SHEET FOR THE CHEMICAL PREPARED IN ACCORDANCE WITH PARAGRAPH (G) OF THIS SECTION.

(5) THE HAZARDS OF MIXTURES OF CHEMICALS SHALL BE DETERMINED AS FOLLOWS:

(i) IF A MIXTURE HAS BEEN TESTED AS A WHOLE TO DETERMINE ITS HAZARDS, THE RESULTS OF SUCH TESTING SHALL BE USED TO DETERMINE WHETHER THE MIXTURE IS HAZARDOUS;

(ii) IF A MIXTURE HAS NOT BEEN TESTED AS A WHOLE TO DETERMINE WHETHER THE MIXTURE IS A HEALTH HAZARD, THE MIXTURE WILL BE ASSUMED TO HAVE THE SAME HEALTH HAZARDS AS DO THE COMPONENTS WHICH COMPRISE ONE PERCENT (BY WEIGHT OR VOLUME) OR GREATER OF THE COMPOSITION, EXCEPT THAT CHEMICALS IDENTIFIED AS CARCINOGENS UNDER PARAGRAPH (D)(4) ABOVE WILL BE IDENTIFIED WHEN PRESENT IN CONCENTRATIONS OF 0.1 PERCENT OR GREATER;

(iii) IF MIXTURE HAS NOT BEEN TESTED AS A WHOLE TO DETERMINE WHETHER THE MIXTURE IS A PHYSICAL HAZARD (E.G., FLAMMABLE), THE CHEMICAL MANUFACTURER, IMPORTER, OR EMPLOYER MAY USE WHATEVER SCIENTIFICALLY VALID DATA IS AVAILABLE TO EVALUATE THE PHYSICAL HAZARD POTENTIAL OF THE MIXTURE; AND

(iv) IF THE EMPLOYER HAS EVIDENCE TO INDICATE THAT A COMPONENT PRESENT IN THE MIXTURE IN CONCENTRATIONS OF LESS THAN ONE PERCENT COULD BE RELEASED IN CONCENTRATIONS WHICH WOULD EXCEED AN ESTABLISHED PERMISSIBLE EXPOSURE LIMIT OR THRESHOLD LIMIT VALUE, OR COULD BE HAZARDOUS TO EMPLOYEES IN THOSE CONCENTRATIONS, THAT COMPONENT SHALL BE IDENTIFIED.

(E) WRITTEN HAZARD COMMUNICATION PROGRAM.

(i) EMPLOYERS SHALL DEVELOP AND IMPLEMENT A WRITTEN HAZARD COMMUNICATION PROGRAM FOR THEIR WORKPLACES WHICH AT LEAST MEETS THE CRITERIA SPECIFIED IN PARAGRAPHS (F), (G), AND (H) OF THIS SECTION FOR LABELS AND PLACARDS, MATERIAL SAFETY DATA SHEETS, AND EMPLOYEE INFORMATION AND TRAINING, AND WHICH INCLUDES THE FOLLOWING:

(i) THE PROCEDURES CHEMICAL MANUFACTURERS, IMPORTERS OR EMPLOYERS USED TO DETERMINE THE HAZARDS OF THE CHEMICALS WHICH THEY PRODUCE, IMPORT OR USE;

(ii) A LIST OF THE HAZARDOUS CHEMICALS KNOWN TO BE PRESENT IN EACH WORK AREA (USING AN IDENTITY THAT IS REFERENCED ON THE APPROPRIATE MATERIAL SAFETY DATA SHEET); AND

(iii) THE METHODS THE EMPLOYER WILL USE TO INFORM EMPLOYEES OF THE HAZARDS OF, NON-ROUTINE TASKS (FOR EXAMPLE, THE CLEANING OF REACTOR VESSELS), AND THE HAZARDS ASSOCIATED WITH CHEMICALS CONTAINED IN UNLABELLED PIPES IN THEIR WORK AREA.

(2) THE EMPLOYER MAY RELY ON AN EXISTING HAZARD COMMUNICATION PROGRAM TO COMPLY

WITH THIS SECTION PROVIDED THAT IT MEETS THE CRITERIA ESTABLISHED IN THIS PARAGRAPH.

(3) THE WRITTEN HAZARD COMMUNICATION PROGRAM, INCLUDING THE REQUIRED LISTS OF HAZARDOUS CHEMICALS, SHALL BE MADE AVAILABLE TO EMPLOYEES OR THEIR DESIGNATED REPRESENTATIVE, THE ASSISTANT SECRETARY AND THE DIRECTOR.

(F) LABELS AND PLACARDS. (1) THE EMPLOYER SHALL ENSURE THAT EACH CONTAINER OF HAZARDOUS CHEMICALS IN THE WORKPLACE IS LABELED, TAGGED OR MARKED WITH THE FOLLOWING INFORMATION:

(I) IDENTITY OF THE HAZARDOUS CHEMICAL(S) CONTAINED THEREIN; AND

(II) APPROPRIATE HAZARD WARNINGS.

(2) WHEN STATIONARY CONTAINERS IN A WORK AREA HAVE SIMILAR CONTENTS AND HAZARDS, THE EMPLOYER MAY POST SIGNS OR PLACARDS TO CONVEY THE REQUIRED INFORMATION RATHER THAN AFFIXING LABELS TO EACH INDIVIDUAL CONTAINER.

(3) THE EMPLOYER MAY USE BATCH PROCESS SHEETS, BATCH TICKETS, OPERATING PROCEDURES, OR OTHER SUCH WRITTEN MATERIALS AS ALTERNATIVES TO INDIVIDUAL LABELS ON STATIONARY PROCESS EQUIPMENT, AS LONG AS THE ALTERNATIVE USED INDICATES THE APPROPRIATE IDENTITY AND HAZARD WARNING(S), AND IS READILY ACCESSIBLE TO EMPLOYEES IN THEIR WORK AREA.

(4) THE EMPLOYER OR IMPORTER SHALL ENSURE THAT EACH CONTAINER OF HAZARDOUS CHEMICALS LEAVING THE WORKPLACE IS LABELED, TAGGED OR MARKED WITH THE FOLLOWING INFORMATION:

(I) IDENTITY OF THE HAZARDOUS CHEMICAL(S);

(II) APPROPRIATE HAZARD WARNINGS; AND

(III) NAME AND ADDRESS OF THE MANUFACTURER OR OTHER RESPONSIBLE PARTY.

(5) CHEMICAL MANUFACTURERS SHALL ENSURE THAT EACH CONTAINER OF HAZARDOUS CHEMICALS LEAVING THE WORKPLACE IS LABELED IN ACCORDANCE WITH THIS SECTION IN A MANNER WHICH DOES NOT CONFLICT WITH THE REQUIREMENTS OF THE HAZARDOUS MATERIALS TRANSPORTATION ACT (18 U.S.C. 1801 ET SEQ.) AND REGULATIONS ISSUED UNDER THAT ACT BY THE DEPARTMENT OF TRANSPORTATION.

(6) THE EMPLOYER NEED NOT AFFIX NEW LABELS TO COMPLY WITH THIS STANDARD IF EXISTING LABELS ALREADY CONVEY THE NECESSARY INFORMATION.

(7) THE EMPLOYER IS NOT REQUIRED TO LABEL PORTABLE CONTAINERS INTO WHICH HAZARDOUS CHEMICALS ARE TRANSFERRED FROM LABELED CONTAINERS, AND WHICH ARE INTENDED ONLY FOR THE IMMEDIATE USE OF THE EMPLOYEE WHO PERFORMS THE TRANSFER.

(8) THE EMPLOYER SHALL NOT REMOVE OR DEFACE EXISTING LABELS ON INCOMING CONTAINERS OF HAZARDOUS CHEMICALS, UNLESS THE CONTAINER IS IMMEDIATELY RELABELED WITH THE REQUIRED INFORMATION.

(9) THE EMPLOYER SHALL ENSURE THAT LABELS ARE LEGIBLE AND PROMINENTLY DISPLAYED ON THE CONTAINER.

(10) DISTRIBUTORS SHALL ENSURE THAT CONTAINERS OF HAZARDOUS CHEMICALS DELIVERED TO MANUFACTURING PURCHASERS ARE LABELED IN ACCORDANCE WITH PARAGRAPH (F)(4) OF THIS SECTION.

(B) MATERIAL SAFETY DATA SHEETS. (1) CHEMICAL MANUFACTURERS AND IMPORTERS SHALL DEVELOP A MATERIAL SAFETY DATA SHEET FOR EACH HAZARDOUS CHEMICAL THEY PRODUCE OR IMPORT. EMPLOYERS SHALL OBTAIN OR DEVELOP A MATERIAL SAFETY DATA SHEET FOR EACH HAZARDOUS CHEMICAL WHICH THEY USE.

(2) EACH MATERIAL SAFETY DATA SHEET SHALL CONTAIN AT LEAST THE FOLLOWING INFORMATION:

(I) THE IDENTITY USED ON THE LABEL, AND, EXCEPT AS PROVIDED FOR IN PARAGRAPH (I) OF THIS SECTION ON TRADE SECRETS;

(A) IF THE HAZARDOUS CHEMICAL IS A SINGLE SUBSTANCE, OR A MIXTURE WHICH HAS BEEN TESTED AS A WHOLE TO DETERMINE ITS HAZARDS, ITS CHEMICAL AND COMMON NAME(S); OR

(B) IF THE HAZARDOUS CHEMICAL IS A MIXTURE, THE CHEMICAL AND COMMON NAME(S) OF ALL INGREDIENTS WHICH HAVE BEEN DETERMINED TO BE HEALTH HAZARDS, AND WHICH COMPRISE GREATER THAN 1 PERCENT OF THE COMPOSITION, EXCEPT THAT CHEMICALS IDENTIFIED AS CARCINOGENS UNDER PARAGRAPH (D)(4) OF THIS SECTION SHALL BE LISTED IN CONCENTRATIONS GREATER THAN 0.1 PERCENT; AND

(C) THE CHEMICAL AND COMMON NAME(S) OF ALL INGREDIENTS WHICH HAVE BEEN DETERMINED TO BE A PHYSICAL HAZARD;

(II) PHYSICAL AND CHEMICAL CHARACTERISTICS OF THE HAZARDOUS CHEMICAL (SUCH AS VAPOR PRESSURE, FLASH POINT);

(III) THE PHYSICAL HAZARDS OF THE HAZARDOUS CHEMICAL, INCLUDING THE POTENTIAL

FOR FIRE, EXPLOSION, AND REACTIVITY:

(IV) KNOWN ACUTE AND CHRONIC HEALTH EFFECTS OF EXPOSURE TO THE HAZARDOUS CHEMICAL, INCLUDING SIGNS AND SYMPTOMS OF EXPOSURE, AND ANY MEDICAL CONDITIONS WHICH ARE GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE TO THE CHEMICAL;

(V) THE PRIMARY ROUTE(S) OF ENTRY AND PERMISSIBLE EXPOSURE LIMIT (FOR THOSE HAZARDOUS CHEMICALS FOR WHICH OSHA HAS PROMULGATED A PERMISSIBLE EXPOSURE LIMIT), AS WELL AS THE ACGIH THRESHOLD LIMIT VALUE AND ANY OTHER AVAILABLE EXPOSURE LIMIT RECOMMENDATIONS;

(VI) ANY PRECAUTIONS FOR SAFE HANDLING AND USE WHICH ARE GENERALLY KNOWN TO THE CHEMICAL MANUFACTURER, IMPORTER OR EMPLOYER, INCLUDING APPROPRIATE HYGIENIC PRACTICES, PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT, AND PROCEDURES FOR CLEAN-UP OF SPILLS AND LEAKS;

(VII) ANY CONTROL MEASURES WHICH ARE GENERALLY KNOWN TO THE CHEMICAL MANUFACTURER, IMPORTER OR EMPLOYER, SUCH AS APPROPRIATE ENGINEERING CONTROLS, WORK PRACTICES, OR PERSONAL PROTECTIVE EQUIPMENT;

(VIII) EMERGENCY AND FIRST AID PROCEDURES;

(IX) THE DATA OF PREPARATION OF THE MATERIAL SAFETY DATA SHEET OR THE LAST CHANGE TO IT; AND

(X) THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE MANUFACTURER OR OTHER RESPONSIBLE PARTY PREPARING OR DISTRIBUTING THE SHEET.

(3) WHERE COMPLEX MIXTURES IN A WORKPLACE HAVE SIMILAR CONTENTS AND HAZARDS, BUT VARY IN SPECIFIC COMPOSITIONS, THE IMPORTER OR EMPLOYER MAY PREPARE ONE MATERIAL SAFETY DATA SHEET TO APPLY TO ALL OF THESE SIMILAR MIXTURES.

(4) IF NO INFORMATION IS FOUND FOR ANY GIVEN CATEGORY ON THE MATERIAL SAFETY DATA SHEET, THE IMPORTER OR EMPLOYER SHALL MARK IT TO INDICATE NO INFORMATION WAS FOUND.

(5) THE CHEMICAL MANUFACTURER, IMPORTER OR EMPLOYER SHALL ENSURE THAT THE INFORMATION ON THE MATERIAL SAFETY DATA SHEET ACCURATELY REFLECTS THE AVAILABLE SCIENTIFICALLY WELL-ESTABLISHED DATA REGARDING THE HAZARDOUS CHEMICAL. IF THE CHEMICAL MANUFACTURER, IMPORTER OR EMPLOYER BECOMES AWARE OF ANY INFORMATION WHICH IS BOTH NEW AND SIGNIFICANT REGARDING THE HEALTH HAZARD OF A CHEMICAL, THIS SHALL BE ADDED TO THE MATERIAL SAFETY DATA SHEET WITHIN THREE MONTHS. IF THE CHEMICAL IS NOT CURRENTLY BEING PRODUCED OR IMPORTED THE CHEMICAL MANUFACTURER OR IMPORTER SHALL ADD THE INFORMATION TO THE MATERIAL SAFETY DATA SHEET BEFORE THE CHEMICAL IS INTRODUCED INTO THE WORKPLACE AGAIN.

(6) CHEMICAL MANUFACTURERS OR IMPORTERS SHALL ENSURE THAT MANUFACTURING PURCHASERS OF HAZARDOUS CHEMICALS ARE PROVIDED AN APPROPRIATE MATERIAL SAFETY DATA SHEET WITH THEIR INITIAL SHIPMENT, AND WITH THE FIRST SHIPMENT AFTER A MATERIAL SAFETY DATA SHEET IS UPDATED. IN LIEU OF PHYSICALLY ATTACHING MATERIAL SAFETY DATA SHEETS TO CONTAINERS SHIPPED, THE CHEMICAL MANUFACTURER OR IMPORTER MAY MAIL THEM TO THE MANUFACTURING PURCHASER AT THE TIME OF THE SHIPMENT. IF THE MATERIAL SAFETY DATA SHEET IS NOT PROVIDED WITH THE SHIPMENT, THE MANUFACTURING PURCHASER SHALL OBTAIN ONE FROM THE CHEMICAL MANUFACTURER OR IMPORTER AS SOON AS POSSIBLE.

(7) DISTRIBUTORS SHALL ENSURE THAT MATERIAL SAFETY DATA SHEETS ARE PROVIDED TO MANUFACTURING PURCHASERS OF HAZARDOUS CHEMICALS.

(8) THE EMPLOYER SHALL MAINTAIN COPIES OF THE REQUIRED MATERIAL SAFETY DATA SHEETS FOR EACH HAZARDOUS CHEMICAL IN THE WORKPLACE, AND SHALL ENSURE THAT THEY ARE READILY ACCESSIBLE TO EMPLOYEES IN EACH WORK AREA.

(9) EMPLOYERS MAY USE PROCESS SHEETS, OPERATING PROCEDURES OR OTHER WRITTEN MATERIALS AS ALTERNATIVES TO MATERIAL SAFETY DATA SHEETS WITHIN THEIR PLANTS, AS LONG AS THE ALTERNATIVE INCLUDES ALL OF THE INFORMATION REQUIRED ON THE MATERIAL SAFETY DATA SHEET, AND IS READILY ACCESSIBLE TO EMPLOYEES IN EACH WORK AREA. THESE ALTERNATIVES MAY ALSO BE USED TO COVER GROUPS OF HAZARDOUS CHEMICALS IN A WORK AREA WHERE IT MAY BE MORE APPROPRIATE TO ADDRESS THE HAZARDS OF A PROCESS RATHER THAN INDIVIDUAL HAZARDOUS CHEMICALS. HOWEVER, THE EMPLOYER SHALL ENSURE THAT IN ALL CASES THE REQUIRED INFORMATION IS PROVIDED FOR EACH HAZARDOUS CHEMICAL INVOLVED, AND IS READILY ACCESSIBLE TO EMPLOYEES IN THE WORK AREA.

(10) MATERIAL SAFETY DATA SHEETS SHALL BE MADE AVAILABLE TO EMPLOYEES AND THEIR DESIGNATED REPRESENTATIVES, AND UPON REQUEST, TO THE ASSISTANT SECRETARY AND THE DIRECTOR. MATERIAL SAFETY DATA SHEETS WHICH ARE CONSIDERED TO BE

EXPOSURE RECORDS AS DEFINED UNDER 29 CFR PART 1910.20. EMPLOYEE ACCESS TO EXPOSURE AND MEDICAL RECORDS, WILL BE MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THAT REGULATION.

(H) EMPLOYEE INFORMATION AND TRAINING. EMPLOYERS SHALL PROVIDE EMPLOYEES WITH INFORMATION AND TRAINING ON HAZARDOUS CHEMICALS IN THEIR WORK AREA AT THE TIME OF THEIR INITIAL ASSIGNMENT, AND WHENEVER A NEW HAZARD IS INTRODUCED INTO THEIR WORK AREA.

(1) INFORMATION. EMPLOYEES SHALL BE INFORMED OF:

(I) THE REQUIREMENTS OF THIS REGULATION;

(II) ANY OPERATIONS IN THE WORK AREA WHERE HAZARDOUS CHEMICALS ARE PRESENT; AND
(III) THE LOCATION AND AVAILABILITY OF THE WRITTEN HAZARD COMMUNICATION PROGRAM, INCLUDING THE REQUIRED LISTS OF HAZARDOUS CHEMICALS, AND MATERIAL SAFETY DATA SHEETS REQUIRED BY THIS SECTION.

(2) TRAINING. EMPLOYEE TRAINING SHALL INCLUDE AT LEAST:

(I) METHODS AND OBSERVATIONS THE EMPLOYEE MAY USE TO DETECT THE PRESENCE OR RELEASE OF A HAZARDOUS CHEMICAL IN THE WORK AREA;

(II) THE HAZARDS OF THE CHEMICALS IN THE WORK AREA;

(III) THE MEASURES EMPLOYEES CAN TAKE TO PROTECT THEMSELVES FROM THE HAZARDS, INCLUDING SPECIFIC PROCEDURES THE EMPLOYER HAS IMPLEMENTED TO PROTECT EMPLOYEES FROM EXPOSURE TO HAZARDOUS CHEMICALS, SUCH AS APPROPRIATE WORK PRACTICES, EMERGENCY PROCEDURES, PERSONAL PROTECTIVE EQUIPMENT TO BE USED, ETC.; AND

(IV) THE DETAILS OF THE HAZARD COMMUNICATION PROGRAM DEVELOPED BY THE EMPLOYER, INCLUDING AN EXPLANATION OF THE LABELING SYSTEM AND THE MATERIAL SAFETY DATA SHEET, AND HOW EMPLOYEES CAN OBTAIN AND USE THE APPROPRIATE HAZARD INFORMATION.

(I) TRADE SECRETS. (1) THE EMPLOYER MAY WITHHOLD THE CHEMICAL NAME AND OTHER SPECIFIC IDENTIFICATION OF A HAZARDOUS CHEMICAL PROVIDED THAT:

(I) THE EMPLOYER CAN SUBSTANTIATE THAT IT IS A TRADE SECRET;

(II) THE OTHER INFORMATION CONTAINED IN THE MATERIAL SAFETY DATA SHEET ON THE PROPERTIES AND EFFECTS OF THE HAZARDOUS CHEMICAL IS DISCLOSED;

(III) THE EMPLOYER INDICATES ON THE MATERIAL SAFETY DATA SHEET THAT THE SPECIFIC CHEMICAL IDENTITY IS BEING WITHHELD AS A TRADE SECRET; AND

(IV) THE CHEMICAL NAME IS MADE AVAILABLE TO HEALTH PROFESSIONALS IN ACCORDANCE WITH (I)(2) BELOW.

(2) AN EMPLOYER SHALL, UPON REQUEST, DISCLOSE THE WITHHELD CHEMICAL NAME TO A HEALTH PROFESSIONAL (I.E., PHYSICIAN, INDUSTRIAL HYGIENIST, TOXICOLOGIST, OR EPIDEMIOLOGIST) PROVIDING MEDICAL OR OTHER OCCUPATIONAL HEALTH SERVICES TO EXPOSED EMPLOYEES.

(3) WHENEVER TRADE SECRET INFORMATION IS DISCLOSED TO AN EMPLOYEE OR DESIGNATED REPRESENTATIVE (INCLUDING HEALTH PROFESSIONALS), THE EMPLOYER MAY REQUIRE, AS A CONDITION OF DISCLOSURE, THAT THE RECIPIENT:

(I) INDICATE IN WRITING THE OCCUPATIONAL HEALTH PURPOSE FOR WHICH THE INFORMATION IS NEEDED; AND

(II) AGREE IN WRITING NOT TO USE THE TRADE SECRET INFORMATION FOR THE PURPOSE OF COMMERCIAL GAIN, AND NOT TO PERMIT MISUSE OF THE TRADE SECRET INFORMATION BY A COMPETITOR OR POTENTIAL COMPETITOR OF THE EMPLOYER.

(4) IN THE CASE OF A MEDICAL EMERGENCY WHERE THE NAME OF A HAZARDOUS CHEMICAL IS REQUIRED FOR PROPER EMERGENCY OR FIRST-AID TREATMENT, THE EMPLOYER SHALL IMMEDIATELY DISCLOSE THE NAME OF A TRADE SECRET CHEMICAL TO THE TREATING HEALTH PROFESSIONAL, REGARDLESS OF THE EXISTENCE OF A WRITTEN STATEMENT OF NEED OR A CONFIDENTIALITY AGREEMENT. THE EMPLOYER MAY REQUIRE A WRITTEN STATEMENT OF NEED AND A CONFIDENTIALITY AGREEMENT AS SOON AS CIRCUMSTANCES PERMIT.

(5) THE CONFIDENTIALITY AGREEMENT AUTHORIZED BY PARAGRAPH (I)(3)(II) ABOVE MAY RESTRICT THE USE OF THE INFORMATION TO THE HEALTH PURPOSES INDICATED IN THE WRITTEN STATEMENT OF NEED, PROHIBIT DISCLOSURE OF THE INFORMATION TO ANYONE WHO HAS NOT ENTERED INTO A SIMILAR AGREEMENT WITH THE CONSENT OF THE EMPLOYER, AND PROVIDE FOR APPROPRIATE LEGAL REMEDIES IN THE EVENT OF A BREACH OF THE AGREEMENT. AND MAY NOW INCLUDE REQUIREMENTS FOR THE POSTING OF A PENALTY BOND OR THE PAYMENT OF LIQUIDATED DAMAGES IF THE PARTY REQUESTING THE TRADE SECRET INFORMATION OBJECTS TO SUCH PROVISIONS.

(6) NOTWITHSTANDING THE EXISTENCE OF A TRADE SECRET CLAIM, AN EMPLOYER SHALL, UPON REQUEST, DISCLOSE TO THE ASSISTANT SECRETARY ANY INFORMATION WHICH THIS SECTION REQUIRES THE EMPLOYER TO MAKE AVAILABLE. WHERE THERE IS A TRADE SECRET

CLAIM, SUCH CLAIM SHALL BE MADE NO LATER THAN AT THE TIME THE INFORMATION IS PROVIDED TO THE ASSISTANT SECRETARY SO THAT SUITABLE DETERMINATIONS OF TRADE SECRET STATUS CAN BE MADE AND THE NECESSARY PROTECTIONS IMPLEMENTED.

(J) EFFECTIVE DATES. EMPLOYERS SHALL BE IN COMPLIANCE WITH THIS SECTION WITHIN THE FOLLOWING TIME PERIODS:

(1) CHEMICAL MANUFACTURERS AND IMPORTERS WILL LABEL CONTAINERS OF HAZARDOUS CHEMICALS LEAVING THEIR WORKPLACES, AND PROVIDE MATERIAL SAFETY DATA SHEETS WITH INITIAL SHIPMENTS, AND DISTRIBUTORS WILL ENSURE SUCH INFORMATION IS PROVIDED TO MANUFACTURING PURCHASERS, BY —(2 YEARS).

(2) ALL EMPLOYERS WILL BE IN COMPLIANCE WITH ALL PROVISIONS OF THIS SECTION BY —(2 1/2 YEARS).

APPENDIX A: HEALTH HAZARD DEFINITIONS

ALTHOUGH SAFETY HAZARDS RELATED TO THE PHYSICAL CHARACTERISTICS OF A CHEMICAL CAN BE OBJECTIVELY DEFINED IN TERMS OF TESTING REQUIREMENTS

(E.G., FLAMMABILITY), HEALTH HAZARD DEFINITIONS ARE LESS PRECISE AND MORE SUBJECTIVE. HEALTH HAZARDS MAY CAUSE MEASURABLE CHANGES IN THE BODY—SUCH AS DECREASED PULMONARY FUNCTION. THESE CHANGES ARE GENERALLY INDICATED BY THE OCCURRENCE OF SIGNS AND SYMPTOMS IN THE EXPOSED EMPLOYEES — SUCH AS SHORTNESS OF BREATH, A NON-MEASURABLE, SUBJECTIVE FEELING. EMPLOYEES EXPOSED TO SUCH HAZARDS SHOULD BE APPRISED OF BOTH THE CHANGE IN BODY FUNCTION AND THE SIGNS AND SYMPTOMS THAT MAY OCCUR TO SIGNAL THAT CHANGE.

THE DETERMINATION OF OCCUPATIONAL HEALTH HAZARDS IS COMPLICATED BY THE FACT THAT MANY OF THE EFFECTS OR SIGNS AND SYMPTOMS OCCUR COMMONLY IN NON-OCCUPATIONALLY EXPOSED POPULATIONS, SO THAT EFFECTS OF EXPOSURE ARE DIFFICULT TO SEPARATE FROM NORMALLY OCCURRING ILLNESSES. OCCASIONALLY, A SUBSTANCE CAUSES AN EFFECT THAT IS RARELY SEEN IN THE POPULATION AT LARGE, SUCH AS ANGIOSARCOMAS CAUSED BY VINYL CHLORIDE EXPOSURE, THUS MAKING IT EASIER TO ASCERTAIN THAT THE OCCUPATIONAL EXPOSURE WAS THE PRIMARY CAUSATIVE FACTOR. MORE OFTEN, HOWEVER, THE EFFECTS ARE COMMON, SUCH AS LUNG CANCER. THE SITUATION IS FURTHER COMPLICATED BY THE FACT THAT MOST CHEMICALS HAVE NOT BEEN ADEQUATELY TESTED TO DETERMINE THEIR HEALTH HAZARD POTENTIAL, AND DATA DOES NOT EXIST TO SUBSTANTIATE THESE EFFECTS.

THERE HAVE BEEN MANY ATTEMPTS TO CATEGORIZE EFFECTS AND TO DEFINE THEM IN VARIOUS WAYS. GENERALLY, THE TERMS /ACUTE/ AND /CHRONIC/ ARE USED TO DELINEATE BETWEEN EFFECTS ON THE BASIS OF SEVERITY OR DURATION. /ACUTE/ EFFECTS USUALLY OCCUR RAPIDLY AS A RESULT OF SHORT-TERM EXPOSURES, AND ARE OF SHORT DURATION. /CHRONIC/ EFFECTS OCCUR AS A RESULT OF LONG-TERM EXPOSURE, AND ARE OF LONG DURATION. NEITHER OF THESE TERMS GIVES SUFFICIENT GUIDANCE TO THOSE ATTEMPTING TO DEFINE A HEALTH HAZARD.

THE ACUTE EFFECTS REFERRED TO MOST FREQUENTLY ARE THOSE DEFINED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARD FOR PRECAUTIONARY LABELING OF HAZARDOUS INDUSTRIAL CHEMICAL (Z129.1-1976) — IRRITATION, CORROSIVITY, SENSITIZATION AND LETHAL DOSE. ALTHOUGH THESE ARE IMPORTANT HEALTH EFFECTS, THEY DO NOT ADEQUATELY COVER THE CONSIDERABLE RANGE OF ACUTE EFFECTS WHICH MAY OCCUR AS A RESULT OF OCCUPATIONAL EXPOSURE, SUCH AS, FOR EXAMPLE, NARCOSIS.

SIMILARLY, THE TERM CHRONIC EFFECT IS OFTEN USED TO COVER ONLY CARCINOGENICITY, TERATOGENICITY, AND MUTAGENICITY. THESE EFFECTS ARE OBVIOUSLY A CONCERN IN THE WORKPLACE, BUT AGAIN, DO NOT ADEQUATELY COVER THE AREA OF CHRONIC EFFECTS, EXCLUDING, FOR EXAMPLE BLOOD DYSCRASIAS (SUCH AS ANEMIA), CHRONIC BRONCHITIS AND LIVER ATROPHY.

THE GOAL OF DEFINING PRECISELY, IN MEASURABLE TERMS, EVERY POSSIBLE HEALTH EFFECT THAT MAY OCCUR IN THE WORKPLACE AS A RESULT OF CHEMICAL EXPOSURES CANNOT REALISTICALLY BE ACCOMPLISHED. THIS DOES NOT NEGATE THE NEED FOR EMPLOYEES TO BE INFORMED OF SUCH EFFECTS AND PROTECTED FROM THEM.

APPENDIX B, WHICH IS MANDATORY, OUTLINES THE PRINCIPLES AND PROCEDURES OF HAZARD ASSESSMENT.

FOR PURPOSES OF THIS SECTION ANY CHEMICALS WHICH MEET THE FOLLOWING DEFINITIONS ARE HEALTH HAZARDS:

1. CARCINOGEN: A CHEMICAL IS CONSIDERED TO BE A CARCINOGEN IF:

(A) IT HAS BEEN EVALUATED BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), AND FOUND TO BE A CARCINOGEN OR POTENTIAL CARCINOGEN; OR

(B) IT IS LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN IN THE ANNUAL REPORT.

2. CORROSIVE: A CHEMICAL THAT CAUSES VISIBLE DESTRUCTION OF, OR IRREVERSIBLE ALTERATIONS IN, LIVING TISSUE BY CHEMICAL ACTION AT THE SITE OF CONTACT. FOR EXAMPLE, A CHEMICAL IS CONSIDERED TO BE CORROSIVE IF, WHEN TESTED ON THE INTACT SKIN OF ALBINO RABBITS BY THE METHOD DESCRIBED BY THE U.S. DEPARTMENT OF TRANSPORTATION IN APPENDIX A TO 49 CFR PART 173, IT DESTROYS OR CHANGES IRREVERSIBLY THE STRUCTURE OF THE TISSUE AT THE SITE OF CONTACT FOLLOWING AN EXPOSURE PERIOD OF FOUR HOURS. THIS TERM SHALL NOT REFER TO ACTION ON INANIMATE SURFACES.

3. HIGHLY TOXIC: A CHEMICAL FALLING WITHIN ANY OF THE FOLLOWING CATEGORIES:

(A) A CHEMICAL THAT HAS A MEDIAN LETHAL DOSE (LD50) OF 50 MILLIGRAMS OR LESS PER KILOGRAM OF BODY WEIGHT WHEN ADMINISTERED ORALLY TO ALBINO RATS WEIGHING BETWEEN 200 AND 300 GRAMS EACH.

(B) A CHEMICAL THAT HAS A MEDIAN LETHAL DOSE (LD50) OF 200 MILLIGRAMS OR LESS PER KILOGRAM OF BODY WEIGHT WHEN ADMINISTERED BY CONTINUOUS CONTACT FOR 24 HOURS WITH THE BARE SKIN OF ALBINO RABBITS WEIGHING BETWEEN TWO AND THREE KILOGRAMS EACH.

(C) A CHEMICAL THAT HAS A MEDIAN LETHAL CONCENTRATION (LC50) IN AIR OF 200 PARTS PER MILLION BY VOLUME OR LESS OF GAS OR VAPOR, OR 2 MILLIGRAMS PER LITER OR LESS OF MIST, FUME, OR DUST, WHEN ADMINISTERED BY CONTINUOUS INHALATION FOR ONE HOUR (OR LESS IF DEATH OCCURS WITHIN ONE HOUR) TO ALBINO RATS WEIGHING BETWEEN 200 AND 300 GRAMS EACH.

(4) IRRITANT: A CHEMICAL, WHICH IS NOT CORROSIVE, BUT WHICH CAUSES A REVERSIBLE INFLAMMATORY EFFECT ON LIVING TISSUE BY CHEMICAL ACTION AT THE SITE OF CONTACT. A CHEMICAL IS A SKIN IRRITANT IF, WHEN TESTED ON THE INTACT SKIN OF ALBINO RABBITS BY THE METHODS OF 16 CFR 1500.41 FOR FOUR HOURS EXPOSURE OR BY OTHER APPROPRIATE TECHNIQUES, IT RESULTS IN AN EMPIRICAL SCORE OF FIVE OR MORE. A CHEMICAL IS AN EYE IRRITANT IF SO DETERMINED UNDER THE PROCEDURE LISTED IN 16 CFR 1500.42 OR OTHER APPROPRIATE TECHNIQUES.

(5) SENSITIZER: A CHEMICAL THAT CAUSES A SUBSTANTIAL PROPORTION OF EXPOSED PEOPLE OR ANIMALS TO DEVELOP AN ALLERGIC REACTION IN NORMAL TISSUE AFTER REPEATED EXPOSURE TO THE CHEMICAL.

(6) TOXIC: A CHEMICAL FALLING WITHIN ANY OF THE FOLLOWING CATEGORIES:

(A) A CHEMICAL THAT HAS MEDIAN LETHAL DOSE (LD50) OF MORE THAN 50 MILLIGRAMS PER KILOGRAM BUT NOT MORE THAN 500 MILLIGRAMS PER KILOGRAM OF BODY WEIGHT WHEN ADMINISTERED ORALLY TO ALBINO RATS WEIGHING BETWEEN 200 AND 300 GRAMS EACH.

(B) A CHEMICAL THAT HAS A MEDIAN LETHAL DOSE (LD50) OF MORE THAN 200 MILLIGRAMS PER KILOGRAM BUT NOT MORE THAN 1,000 MILLIGRAMS PER KILOGRAM OF BODY WEIGHT WHEN ADMINISTERED BY CONTINUOUS CONTACT FOR 24 HOURS (OR LESS IF DEATH OCCURS WITHIN 24 HOURS) WITH THE BARE SKIN OF ALBINO RABBITS WEIGHING BETWEEN TWO AND THREE KILOGRAMS EACH.

(C) A CHEMICAL THAT HAS A MEDIAN LETHAL CONCENTRATION (LC50) IN AIR OR MORE THAN 200 PARTS PER MILLION BUT NOT MORE THAN 2,000 PARTS PER MILLION BY VOLUME OF GAS OR VAPOR, OR MORE THAN TWO MILLIGRAMS PER LITER BUT NOT MORE THAN 20 MILLIGRAMS PER LITER OF MIST, FUME, OR DUST, WHEN ADMINISTERED BY CONTINUOUS INHALATION FOR ONE HOUR (OR LESS IF DEATH OCCURS WITHIN ONE HOUR) TO ALBINO RATS WEIGHING BETWEEN 200 AND 300 GRAMS EACH.

IN ADDITION, THE FOLLOWING IS A TARGET ORGAN CATEGORIZATION OF EFFECTS WHICH MAY OCCUR, INCLUDING EXAMPLES OF SIGNS AND SYMPTOMS AND CHEMICALS WHICH HAVE BEEN FOUND TO CAUSE SUCH EFFECTS. THESE EXAMPLES ARE PRESENTED TO ILLUSTRATE THE RANGE AND DIVERSITY OF EFFECTS AND HAZARDS FOUND IN THE WORKPLACE, AND THE BROAD SCOPE EMPLOYERS MUST CONSIDER IN THIS AREA, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE.

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|---------------------|---|
| 1. HEPATOTOXINS: | CHEMICALS WHICH PRODUCE LIVER DAMAGE |
| SIGNS AND SYMPTOMS: | JAUNDICE; HEPATITIS |
| CHEMICALS: | CARBON TETRACHLORIDE; NITROSAMINES |
| 2. NEPHROTOXINS: | CHEMICALS WHICH PRODUCE KIDNEY DAMAGE |
| SIGNS AND SYMPTOMS: | DECREASED ELIMINATION OF WASTES |
| CHEMICALS: | HALOGENATED HYDROCARBONS; URANIUM |
| 3. NEUROTOXINS: | CHEMICALS WHICH PRODUCE THEIR PRIMARY TOXIC EFFECTS ON THE NERVOUS SYSTEM |
| SIGNS AND SYMPTOMS: | NARCOSIS; BEHAVIORAL CHANGES; DECREASE |

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| 4. AGENTS WHICH ACT ON THE BLOOD OR HEMATOPOIETIC SYSTEM: | IN MOTOR FUNCTIONS
MERCURY; CARBON DISULFIDE
LOWER BLOOD PRESSURE; DEPRIVE THE BODY TISSUES OF OXYGEN |
| SIGNS AND SYMPTOMS: | LEUKEMIA; ANEMIA |
| CHEMICALS: | CARBON MONOXIDE; CYANIDES |
| 5. AGENTS WHICH DAMAGE THE LUNG: | CHEMICALS WHICH IRRITATE OR DAMAGE THE PULMONARY TISSUE |
| SIGNS AND SYMPTOMS: | COUGH; TIGHTNESS IN CHEST; FIBROSIS |
| CHEMICALS: | SILICA; ASBESTOS |
| 6. REPRODUCTIVE TOXINS: | CHEMICALS WHICH AFFECT THE REPRODUCTIVE CAPABILITIES INCLUDING CHROMOSOMAL DAMAGE (MUTATIONS) AND EFFECTS ON FETUSES (TERATOGENESIS) |
| SIGNS AND SYMPTOMS: | BIRTH DEFECTS; STERILITY |
| CHEMICALS: | LEAD; PCB |
| 7. CUTANEOUS HAZARDS: | CHEMICALS WHICH AFFECT THE DERMAL LAYER OF THE BODY |
| SIGNS AND SYMPTOMS: | DEFATTING OF THE SKIN; RASHES; IRRITATION |
| CHEMICALS: | KETONES; CHLORINATED COMPOUNDS |
| 8. EYE HAZARDS: | CHEMICALS WHICH AFFECT THE EYE OR VISUAL CAPACITY |
| SIGNS AND SYMPTOMS: | CONJUNCTIVITIS; CORNEAL DAMAGE |
| CHEMICALS: | ORGANIC SOLVENTS; ACIDS |

APPENDIX B. HAZARD DETERMINATION

THE QUALITY OF A HAZARD COMMUNICATION PROGRAM IS LARGELY DEPENDENT UPON THE ADEQUACY AND ACCURACY OF THE HAZARD DETERMINATION. THE HAZARD DETERMINATION REQUIREMENT OF THIS STANDARD IS PERFORMANCE-ORIENTED. CHEMICAL MANUFACTURERS OR IMPORTERS ARE NOT REQUIRED TO FOLLOW ANY SPECIFIC METHODS FOR DETERMINING HAZARDS, BUT IT IS INCIDENT UPON THEM TO DEMONSTRATE THAT THEY HAVE ADEQUATELY ASCERTAINED THE SCIENTIFICALLY WELL-ESTABLISHED HAZARDS OF THE CHEMICALS PRODUCED.

HAZARD EVALUATION IS A PROCESS WHICH RELIES HEAVILY ON THE PROFESSIONAL JUDGMENT OF THE EVALUATOR, PARTICULARLY IN THE AREA OF CHRONIC HAZARDS. THE PERFORMANCE-ORIENTATION OF THE HAZARD DETERMINATION DOES NOT DIMINISH THE DUTY OF THE CHEMICAL MANUFACTURER OR IMPORTER TO CONDUCT A THOROUGH EVALUATION, EXAMINING ALL RELEVANT DATA, AND PRODUCING A SCIENTIFICALLY DEFENSIBLE EVALUATION. FOR PURPOSES OF THIS STANDARD, THE FOLLOWING PARAMETERS WILL BE USED TO HELP DEFINE /SCIENTIFICALLY WELL-ESTABLISHED/.

1. CARCINOGENICITY: AS DESCRIBED IN PARAGRAPH (D)(4) AND APPENDIX A OF THIS SECTION, A DETERMINATION BY THE NATIONAL TOXICOLOGY PROGRAM OR THE INTERNATIONAL AGENCY ON RESEARCH AND CANCER THAT A CHEMICAL IS A POTENTIAL CARCINOGEN WILL BE SCIENTIFICALLY WELL-ESTABLISHED EVIDENCE FOR PURPOSES OF THIS STANDARD.
2. HUMAN DATA: EPIDEMIOLOGICAL STUDIES AND CASE REPORTS OF ADVERSE HEALTH EFFECTS WILL BE CONSIDERED IN THE EVALUATION.
3. ANIMAL DATA: HUMAN EVIDENCE OF HEALTH EFFECTS IN EXPOSED POPULATIONS IS GENERALLY NOT AVAILABLE FOR THE MAJORITY OF CHEMICALS PRODUCED OR USED IN THE WORKPLACE. THEREFORE, THE AVAILABLE RESULTS OF TOXICOLOGICAL TESTING IN ANIMAL POPULATIONS WILL BE USED TO PREDICT THE HEALTH EFFECTS THAT MAY BE EXPERIENCED BY EXPOSED WORKERS. IN PARTICULAR, THE DEFINITIONS OF CERTAIN ACUTE HAZARDS REFER TO SPECIFIC ANIMAL TESTING RESULTS (SEE APPENDIX A).
4. ADEQUACY OF DATA. THE RESULTS OF ANY STUDIES WHICH ARE DESIGNED AND CONDUCTED ACCORDING TO ACCEPTABLE SCIENTIFIC PRINCIPLES, AND WHICH REPORT STATISTICALLY SIGNIFICANT CONCLUSIONS REGARDING THE HEALTH EFFECTS OF A CHEMICAL, WILL BE REPORTED.
5. REPORTING OF DATA. THE CHEMICAL MANUFACTURER OR IMPORTER NEED NOT AFFERT IN A CONCLUSIONARY FASHION DATA THEY DON'T AGREE WITH, I.E., IF THEY DO NOT AGREE THAT THE CHEMICAL IS A CARCINOGEN, THEY DO NOT HAVE TO STATE THAT IT IS. HOWEVER, THE EMPLOYER MUST STATE THAT THE NTP OR IARC HAVE REPORTED THAT IT MAY BE A POTENTIAL CARCINOGEN. IF ANY STUDY MEETS THE SCIENTIFIC CRITERIA ESTABLISHED HEREIN, THE RESULTS MUST BE REPORTED WHETHER THE CHEMICAL

MANUFACTURER OR IMPORTER AGREE WITH THE FINDINGS OR NOT.

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SOURCES

- ANY INFORMATION EMPLOYERS HAVE IN THEIR OWN COMPANY FILES SUCH AS TOXICITY TESTING RESULTS OR ILLNESS EXPERIENCE OF COMPANY EMPLOYEES.
- ANY INFORMATION OBTAINED FROM THE SUPPLIER OF THE CHEMICAL, SUCH AS MATERIAL SAFETY DATA SHEETS OR PRODUCT SAFETY BULLETINS.
- ANY PERTINENT INFORMATION OBTAINED FROM THE FOLLOWING SOURCE LIST (LATEST EDITIONS SHOULD BE USED):

/CONDENSED CHEMICAL DICTIONARY/ BY A. AND E. ROSE
REINHOLD PUBLISHING CORPORATION
450 WEST 33RD STREET
NEW YORK, NY 10001

/THE MERCK INDEX: AN ENCYCLOPEDIA OF CHEMICALS AND DRUGS/
MERCK AND COMPANY, INC.
126 E. LINCOLN AVENUE
RAHWAY, NJ 07065

/IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK
OF CHEMICALS TO MAN/
GENEVA: WORLD HEALTH ORGANIZATION
INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, 1972-1977
(MULTIVOLUME WORK)

/INDUSTRIAL HYGIENE AND TOXICOLOGY, BY F.A. PATTY/
JOHN WILEY AND SONS, INC.
NEW YORK, NY
(FIVE VOLUMES)

/CLINICAL TOXICOLOGY OF COMMERCIAL PRODUCTS/
GLEASON, GOSSELIN AND HODGE

/CASARETT AND DOULL'S
TOXICOLOGY: THE BASIC SCIENCE OF POISONS/
DOULL, KLAASSEN, AND AMOUR
MACMILLAN PUBLISHING CO., INC.
NEW YORK, NY

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/TOXICOLOGY OF THE EYE, BY W. MORTON GRANT/
CHARLES C. THOMAS
SPRINGFIELD, MD

/RECOGNITION OF HEALTH HAZARDS IN INDUSTRY/
WILLIAM A. BURGESS
JOHN WILEY AND SONS
U.S.A.

/CHEMICAL HAZARDS OF THE WORKPLACE/
NICK H. PROCTOR AND JAMES P. HUGHES
J.P. LIPPINCOTT COMPANY
PHILADELPHIA, PA

/HANDBOOK OF CHEMISTRY AND PHYSICS/
CHEMICAL RUBBER COMPANY
18901 CRAWFORD PARKWAY
CLEVELAND, OH 44128

/THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL
AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES/
AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
1014 BROADWAY
CINCINNATI, OH 45202

/DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, BY M. IRVING SAI/
REINHOLD PUBLISHING CORPORATION
450 WEST 33RD STREET
NEW YORK, NY 10001

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NIOSH/OSHA POCKET GUIDE TO CHEMICAL HAZARDS/

NIOSH PUB. NO. 79-210

REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES/

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

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THE INDUSTRIAL ENVIRONMENT - ITS EVALUATION AND CONTROL/

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