

OCCIDENTAL CHEMICAL CORPORATION
PVC RESINS DIVISION
SPECIFIC CHEMICAL TRAINING
HAZARD COMMUNICATION STANDARD

PART I

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OCC 11207

NOTE: WHEN DISCUSSING THESE RAW MATERIALS, WE WILL BE PUTTING MATERIALS IN GROUPS WHICH HAVE THE SAME OR VERY SIMILIAR TOXIC EFFECTS. KEEP IN MIND THAT THEY ARE GROUPED FOR CONVENIENCE OF PRESENTATION AND TRAINING AND NOT FOR SPECIFIC SCIENTIFIC ACCURACY. WHEN QUESTIONS ARISE, REFER TO THE MATERIAL SAFETY DATA SHEET FOR THE PRODUCT.

SPECIFIC HAZARD INFORMATION ON RAW MATERIALS

SECTION I - MONOMERS AND SOLVENTS

ITEMS TO BE COVERED IN THIS SECTION ARE THE MONOMERS AND SOLVENTS USED IN THE CHEMICAL PLANT.

MONOMERS ARE THOSE WITH CODE NUMBERS OF FROM CD 001 TO CD 099

SOLVENTS ARE THOSE WITH CODE NUMBERS OF FROM CD 500 TO CD 600

(SHOW TRANSPARENCY TP-1)

<u>MONOMERS</u>		<u>SOLVENTS</u>	
<u>CD</u>		<u>CD</u>	
001	VINYL CHLORIDE *C	502	METHYL ETHYL KETONE
007	VINYL ACETATE	503	ACETONE
067	TRIALLYL ISOCYANURATE (TAIC)	504	DIMETHYL FORMAMIDE *
073	ISO-BUTYLENE	506	STODDARD SOLVENT
075	HYDROXYPROPYL ACRYLATE	507	CYCLOHEXANONE
094	HYDROGEN BUTYL MALEATE	508	XYLENE
095	DIBUTYL MALEATE	517	TETRAHYDROFURAN
097	a-METHYL STYRENE	521	7D-24-MG3
098	TRIFLUOROCHLOROETHYLENE (TFCE)	598	CARNEA OIL
		601	TOLUENE
		606	METHANOL

NOTE: *C = HUMAN CARCINOGEN * = SPECIFIC HEALTH HAZARD

WE WILL COVER THESE TOGETHER SINCE THE MONOMERS AND THE SOLVENTS HAVE A LOT IN COMMON AS FOR AS THEIR TOXIC PROPERTIES ARE CONCERNED. FIRST OFF, WE ALL KNOW BY PRIOR TRAINING THAT VINYL CHLORIDE (VCM) IS A CARCINOGEN AND THAT CANCER OF THE LIVER CAN RESULT IN LONG TERM EXPOSURE TO VCM. THE PERMISSIBLE EXPOSURE LIMIT OF VCM IS 1 PPM TIME WEIGHTED OVER 8 HOURS WITH NO CONTACT WITH THE LIQUID VCM. SINCE THERE IS A SPECIFIC TRAINING PROGRAM FOR VCM, WE WILL NOT COVER IT FURTHER HERE.

VINYL ACETATE (CD 007), METHYL ETHYL KETONE (CD 502), ACETONE (CD 503), CYCLOHEXANONE (CD 507), AND TOLUENE (CD 601) HAVE SIMILAR TOXIC PROPERTIES IN THAT THE LIQUIDS CAN CAUSE IRRITATION TO THE EYES WHICH MAY RESULT IN TRANSIENT CORNEAL DAMAGE, SUCH AS BLURRING OF VISION. THEY MAY CAUSE IRRITATION AND DEFATTING OF THE SKIN. IF EXPOSED TO LEVELS ABOVE THE STANDARD, THE EYES AND UPPER RESPIRATORY TRACT MAY BE IRRITATED. VERY HIGH CONCENTRATIONS CAN CAUSE DIZZINESS AND LOSS OF CONSCIOUSNESS. THEY HAVE A RELATIVELY LOW ORDER OF ORAL TOXICITY, BUT MASSIVE INTAKES CAN EFFECT THE CENTRAL NERVOUS SYSTEM.

ISO-BUTYLENE (CD 073) AND TRIFLUOROCHLOROETHYLENE (TFCE) (CD 098) ARE SUPPLIED AS GASES. BOTH ARE MILDLY IRRITATING TO THE EYES AND SKIN AND

WILL TEND TO DEFAT THE SKIN. THEY ARE MILDLY IRRITATING TO THE MUCOUS MEMBRANES IN THE UPPER RESPIRATORY TRACT. SINCE THEY ARE GASES, IF A LEAK DEVELOPS WHILE THE LIQUID IS UNDER PRESSURE, THE GAS BLOWING THRU THE LEAK WOULD BE VERY COLD AND COULD CAUSE FROSTBITE. BOTH CAN BE CONSIDERED AS SIMPLE ASPHYZIANIS, IN THAT THEY CAN DISPLACE THE OXYGEN IN THE AIR IN CONFINED SPACES. HIGH EXPOSURES CAN CAUSE DIZZINESS, AND DROWSINESS. IN ADDITION, VERY HIGH EXPOSURES TO CD 098 CAN CAUSE NAUSEA, VOMITING, POTENTIAL KIDNEY DAMAGE, WITH EXTREMELY HIGH LEVELS DEATH FROM ASPHYXIA (LACK OF SUFFICIENT OXYGEN TO SUPPORT LIFE).

XYLENE (CD 508), TETRAHYDROFURAN (CD 517), METHYL ISOBUTYL KETONE (CD 505) AND STODDARD SOLVENT (CD 506) ARE SLIGHTLY IRRITATING TO THE SKIN WITH POSSIBLE IRRITATION FROM DEFATTING. INHALATION OF HIGH LEVELS OF XYLENE AND STODDARD SOLVENT FOR LONG PERIODS OF TIME CAN LEAD FROM MILD DEPRESSION, HEADACHES, NAUSEA, DIZZINESS TO LOSS OF CONSCIOUSNESS. INHALATION OF HIGH LEVELS OF METHYL ISOBUTYL KETONE CAN LEAD TO IRRITATION OF THE RESPIRATORY TRACT, DIZZINESS, NAUSEA, UNCONSCIOUSNESS. SIMILAR PROBLEMS ARE TRUE FOR METHANOL (CD 606 METHYL ALCOHOL) EXCEPT THAT THE EXTREMELY HIGH EXPOSURES CAUSE GIDDINESS INSTEAD OF DEPRESSION AND IT IS VERY TOXIC IF TAKEN BY MOUTH. METHANOL WILL CAUSE SEVERE DAMAGE TO THE OPTIC NERVE LEADING TO BLINDNESS, GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA, NARCOSIS AND DEATH IF ENOUGH IN INGESTED.

HYDROXYPROPYL ACRYLATE (CD 075) AND α -METHYL STYRENE (CD 097) ARE EXTREMELY OR SEVERELY IRRITATING TO THE EYES FROM EXPOSURE TO THE LIQUIDS OR CONCENTRATED VAPORS. HYDROXYPROPYL ACRYLATE CAN CAUSE PERMANENT IMPAIRMENT OF VISION AND BLINDNESS, IN HIGH EXPOSURES. BOTH MATERIALS CAN CAUSE SEVERE IRRITATION TO THE SKIN WITH RASHES AND BLISTERING POSSIBLE. BOTH ARE IRRITATING TO THE RESPIRATORY TRACT. HIGH LEVELS OF HYDROXYPROPYL ACRYLATE CAN CAUSE PROBLEMS WITH THE KIDNEY AND LIVER WITH HIGH ENOUGH EXPOSURE CAUSING DEATH AND IS MODERATELY TOXIC BY MOUTH.

LITTLE COULD BE FOUND REGARDING HYDROGEN BUTYL MALEATE (CD 094) EXCEPT THAT WITH TEST ANIMALS THE MATERIAL WAS QUITE IRRITATING SEVERELY IRRITATING TO RABBITS EYES, MILDLY IRRITATING TO THE SKIN OF RABBITS, WITH NO INFORMATION ON INHALATION OR INGESTION PROBLEMS.

DIBUTYL MALEATE (CD 095) IS MODERATELY IRRITATING THE EYES AND SKIN AND IF THE PRODUCT IS HEATED THE IRRITATION WOULD BE GREATER TO THE EYES, NOSE, AND THROAT AND UPPER RESPIRATORY TRACT. INGESTION OF DIBUTYL MALEATE CAN CAUSE NAUSEA, VOMITING, AND DIARRHEA.

LAST ON OUR LIST IS DIMETHYL FORMAMIDE (CD 504). THIS MATERIAL IS IRRITATING TO THE EYES AND SKIN AND CAN BE HARMFUL TO THE LIVER, KIDNEYS AND BONE MARROW IF SUFFICIENT ABSORPTION OCCURS. DIMETHYL FORMAMIDE CAN BE HARMFUL TO THESE SAME ORGANS IF INHALED IN SUFFICIENT QUANTITIES. OTHER PROBLEMS OF INHALATION INCLUDE HEADACHE, WEAKNESS, AND ABDOMINAL DISCOMFORT. IT HAS BEEN REPORTED THAT DIMETHYL FORMAMIDE IS A POSSIBLE EMBRYO TOXIC (EFFECTING THE UNBORN FETUS) IN HUMANS SINCE THIS HAS OCCURRED WITH TEST ANIMALS. WE KNOW OF NO EVIDENCE OF THIS OCCURRING IN HUMANS.

ONE THING THAT ALL OF THESE MATERIALS SHARE IN COMMON IS THAT THEY ARE ALL FLAMMABLE. CD 001, 073, AND 098 ARE EXTREMELY FLAMMABLE (HMIS RATE OF 4). CD 007, 502, 503, 505, 508, 517, 601 AND 606 ARE VERY FLAMMABLE (HMIS RATE OF 3). CD 097, 504, 506, AND 507 ARE MODERATELY FLAMMABLE (HMIS RATE OF 2). CD 607, 075, 094 AND 095 ARE SLIGHTLY FLAMMABLE (HMIS RATE OF 1).