



HILLSBORO ELEMENTARY SCHOOLS

715 S.E. 10th Ave.
HILLSBORO, OR 97122

MATERIAL SAFETY DATA SHEET OT 0027

VERSION: 014

CHLOROTHENE (R) SM SOLVENT

REVISION OF: 10/08/90

ORDER NO: 140366
PROD NO : 191080

HILLSBORO SCHOOL DIST #7
FOOD WAREHOUSE
512 N.E. THIRD

HILLSBORO ,OR 97124

VAN WATERS & ROGERS
1600 NORTON BUILDING

, SUBSIDIARY OF UNIVAR
, SEATTLE

(408)435-8700
, WA 98104

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

----- FOR PRODUCT AND SALES INFORMATION -----

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE AT
VW&R PORTLAND OFFICE 503-222-1721 PORTLAND , OR

-----PRODUCT IDENTIFICATION-----

PRODUCT NAME: CHLOROTHENE (R) SM SOLVENT

CAS NO.: 71-55-6

COMMON NAMES/SYNONYMS: INHIBITED

MSDS #: P1260009

1,1,1-TRICHLOROETHANE;
BLEND CHEMCO SAF-T-SOLV NC

FORMULA: C2 H3 CL3

DATE ISSUED: 09/90

MOLECULAR WEIGHT: 132

SUPERCEDES: 06/90

HAZARD RATING (NFPA 49)

HMIS RATING

HEALTH: 2
FIRE: 1
REACTIVITY: 0
SPECIAL: NONE

HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

HEALTH: 2
FIRE: 1
REACTIVITY: 0

-----HAZARDOUS INGREDIENTS-----

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PPM			HAZARD
			OSHA PEL	ACGIH TLV	OTHER LIMIT	
1,1,1-TRICHLOROETHANE	71-55-6	96.5	350	350	450	OSHA/ACGIH LIST

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							(STEL)
DIETHYLENE ETHER	123-91-1	2.5	25	25	NONE (Skin)	CARCINOGEN	
(1,4 DIOXANE)							
1,2-BUTYLENE OXIDE	106-88-7	0.5	NONE	NONE	40 (DOW)	FLAMMABLE	
NITROMETHANE	75-52-5	0.3	100	100	NONE	FLAMMABLE	
OTHER INGREDIENTS	UNREPORTED	BAL.	NONE	NONE	NONE	NONE	

(R) TRADEMARK OF THE DOW CHEMICAL COMPANY

-----PHYSICAL PROPERTIES-----

BOILING POINT, DEG F: 165

MELTING POINT, DEG F: N/A

SPECIFIC GRAVITY (WATER=1): 1.321

VAPOR PRESSURE, MM HG/20 DEG C: 100

pH: NO DATA AVAILABLE

VAPOR DENSITY (AIR=1): 4.55

WATER SOLUBILITY, X: NIL

EVAPORATION RATE (BUTYL ACETATE=1): >1

X VOLATILE (BY VOLUME): 100

APPEARANCE AND ODOR: CLEAR, COLORLESS LIQUID; IRRITATING

ODOR AT HIGH CONCENTRATIONS.

-----FIRST AID MEASURES-----

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

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IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION. IF VOMITING OCCURS SPONTANEOUSLY, KEEP VICTIM'S HEAD BELOW HIS HIPS TO PREVENT HIS BREATHING THE VOMITUS INTO HIS LUNGS.

NOTE TO PHYSICIAN: BECAUSE RAPID ABSORPTION MAY OCCUR THROUGH LUNGS IF ASPIRATED AND CAUSE SYSTEMIC EFFECTS, THE DECISION OF WHETHER TO INDUCE VOMITING OR NOT SHOULD BE MADE BY AN ATTENDING PHYSICIAN. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGEAL CONTROL. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING STOMACH. EXPOSURE MAY INCREASE "MYOCARDIAL IRRITABILITY." DO NOT ADMINISTER SYMPATHOMIMETIC DRUGS UNLESS ABSOLUTELY NECESSARY. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN
RESPONSE TO REACTIONS OF THE PATIENT.

-----HEALTH HAZARD INFORMATION-----

PRIMARY ROUTES OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: MINIMAL EFFECTS EXPECTED AT EXPOSURES BELOW 1,000 PPM. DIZZINESS, DROWSINESS, AND THROAT IRRITATION EXPECTED AS A RESULT OF EXPOSURES ABOVE 1,000 PPM. UNCONSCIOUSNESS AND DEATH POSSIBLE AT EXPOSURES ABOVE 10,000 PPM. BLOOD PRESSURE DEPRESSION, CARDIAC SENSITIZATION, AND VENTRICULAR ARRHYTHMIA CAN RESULT FROM EXPOSURE TO NEAR ANESTHETIC LEVELS.

EYE CONTACT: LIQUID AND VAPORS CAN IRRITATE THE EYES, WITH SLIGHT TEMPORARY CORNEAL INJURY. MAY CAUSE CONJUNCTIVITIS.

SKIN CONTACT: BRIEF CONTACT MAY DRY THE SKIN. PROLONGED OR REPEATED CONTACT MAY IRRITATE THE SKIN, CAUSING DERMATITIS. A SINGLE PROLONGED SKIN EXPOSURE IS NOT LIKELY TO ABSORB HARMFUL AMOUNTS.

SWALLOWED: SWALLOWING THE LIQUID MAY RESULT IN VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, DO NOT ALLOW VOMITUS TO BE BREATHED INTO THE LUNGS AS EVEN A SMALL QUANTITY IN THE LUNGS MAY RESULT IN CHEMICAL PNEUMONITIS AND PULMONARY EDEMA/HEMORRHAGE. SINGLE DOSE TOXICITY IS LOW TO MODERATE.

CHRONIC EFFECTS OF EXPOSURE: NONE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: ACUTE AND CHRONIC LIVER DISEASE AND RHYTHM DISORDERS OF THE HEART.

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-----TOXICITY DATA-----

ORAL: RAT LD50 = 10.3 G/KG; HUMAN TOLD = 670 MG/KG

DERMAL: RABBIT LD50 > 15 G/KG

INHALATION: MAN TOLD = 350 PPM

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: THREE STUDIES HAVE BEEN PERFORMED ON LABORATORY ANIMALS TO EVALUATE THE EFFECTS OF 1,1,1-TRICHLOROETHANE ON REPRODUCTION AND FETAL DEVELOPMENT. TWO OF THE THREE STUDIES INDICATE NO REPRODUCTIVE TOXICITY. THE THIRD STUDY NOTED DELAYS IN NORMAL DEVELOPMENT, BUT THESE DELAYS DID NOT AFFECT LATER LIFE.

1,1,1-TRICHLOROETHANE HAS NOT BEEN SHOWN TO INTERFERE WITH REPRODUCTION. BIRTH DEFECTS ARE UNLIKELY. EXPOSURES HAVING NO EFFECT ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS.

THE FORMULATION CONTAINING 1,1,1-TRICHLOROETHANE, 1,4-DIOXANE, 1,2-BUTYLENE OXIDE, AND NITROMETHANE WAS TESTED IN LONG-TERM ANIMAL STUDIES AND DID NOT CAUSE CANCER.

-----ECOLOGICAL INFORMATION-----

NO DATA AVAILABLE

-----PERSONAL PROTECTION-----

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: IF USE CONDITIONS GENERATE VAPORS OR MISTS, WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS ALSO WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

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PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, RUBBER BOOTS, NEOPRENE GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

-----FIRE AND EXPLOSION INFORMATION-----

FLASH POINT, DEG F: NONE
METHOD USED: N/A

FLAMMABLE LIMITS IN AIR, %
LOWER: 7.5 UPPER: 15.0

AUTOIGNITION TEMPERATURE, DEG. F: NO DATA AVAILABLE

EXTINGUISHING MEDIA: WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF IGNITION SINCE VAPORS DECOMPOSE TO HAZARDOUS PRODUCTS AT HIGH TEMPERATURES. VAPORS MAY FORM A FLAMMABLE ATMOSPHERE IN CONFINED AREAS.

-----HAZARDOUS REACTIVITY-----

STABILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: OPEN FLAMES, WELDING ARCS, OR OTHER HIGH TEMPERATURE SOURCES WHICH MAY INDUCE THERMAL DECOMPOSITION.

MATERIALS TO AVOID: ALKALIS, OXIDIZING MATERIALS, WATER, MOIST AIR, POWDERED ALUMINUM, POWDERED ZINC, OR THEIR ALLOYS, OR OTHER REACTIVE METALS. DO NOT PACKAGE THIS PRODUCT IN ALUMINUM CONTAINERS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE, CARBON DIOXIDE, HYDROGEN CHLORIDE, CHLORINE, OR PHOSGENE.

-----SPILL, LEAK, AND DISPOSAL PROCEDURES-----

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR

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EYE PROTECTION. FOR SMALL SPILLS OR DRIPS, MOP OR WIPE UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY DIKING WITH SOIL OR OTHER NON-COMBUSTIBLE SORBENT MATERIAL AND THEN PUMP INTO DOT-APPROVED WASTE CONTAINERS; OR ABSORB WITH NON-COMBUSTIBLE SORBENT MATERIAL, PLACE RESIDUE IN DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOILS.

COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

-----SPECIAL PRECAUTIONS-----

STORAGE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. VENT CONTAINER FREQUENTLY, AND MORE OFTEN IN WARM WEATHER, TO RELIEVE PRESSURE. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER.

OTHER PRECAUTIONS: THIS PRODUCT SHOULD NOT BE PACKAGED IN ALUMINUM AEROSOL CANS OR WITH FINELY DIVIDED ALUMINUM OR ITS ALLOYS IN AN AEROSOL CAN. ALUMINUM IS NOT AN ACCEPTABLE MATERIAL OF CONSTRUCTION FOR PUMPS, MIXERS, FITTINGS, OR STORAGE TANKS.

-----OTHER REGULATORY INFORMATION-----

SECTION 313: SEE BELOW

PROPOSITION 65: NONE

SECTION 313 & PROP. 65: SEE BELOW

SECTION 313 (WITH CHEMICALS LISTED): THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

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CHEMICAL(S)	CAS NO.	% WT.
1,1,1-TRICHLOROETHANE	71-55-6	96.5
1,4 DIOXANE	123-91-1	2.5

PROPOSITION 65 (WITH CHEMICALS LISTED): THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) CONSIDERED BY THE STATE OF CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65) AS CAUSING CANCER OR REPRODUCTIVE TOXICITY AND FOR WHICH WARNINGS ARE NOW REQUIRED:

CHEMICAL(S)	CAS NO.	% WT.
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MASSACHUSETTS: UNDER THE MASSACHUSETTS RIGHT-TO-KNOW LAW, HAZARDOUS SUBSTANCE AND EXTRAORDINARILY HAZARDOUS SUBSTANCES COMPONENTS PRESENT IN THIS PRODUCT WHICH REQUIRES REPORTING ARE:

EXTRAORDINARILY HAZARDOUS SUBSTANCES CHEMICAL(S)	CAS NO.	CONCENTRATION (>0.0001%)
1,4 DIOXANE	123-91-1	2.5

HAZARDOUS SUBSTANCES CHEMICAL(S)	CAS NO.	CONCENTRATION (>1%)
1,1,1-TRICHLOROETHANE	71-55-6	> 96

PENNSYLVANIA: UNDER THE PENNSYLVANIA RIGHT-TO-KNOW LAW, HAZARDOUS SUBSTANCES AND SPECIAL HAZARDOUS SUBSTANCES COMPONENTS PRESENT IN THIS PRODUCT WHICH REQUIRE REPORTING ARE:

SPECIAL HAZARDOUS SUBSTANCES CHEMICAL(S)	CAS NO.	CONCENTRATION (>0.01%)
1,4 DIOXANE	123-91-1	2.5

HAZARDOUS SUBSTANCES CHEMICAL(S)	CAS NO.	CONCENTRATION (>1%)
1,1,1-TRICHLOROETHANE	71-55-6	> 96

CALIFORNIA SCAQMD: NONE

TSCA: THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY.

-----REVISION-----

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04/89: CORRECTED COMPOSITION HAZARD AND OTHER REGULATORY INFORMATION.

06/89: REVISED PEL AND EXPANDED OTHER SYSTEMIC EFFECT.

08/89: CHANGED HEADING AND CONTACT INFORMATION.

05/90: ADDED MOLECULAR WEIGHT, HMIS RATING, HAZARDOUS INGREDIENTS,
AUTOIGNITION TEMPERATURE, PH, % VOLATILE, ECOLOGICAL INFORMATION, AND OTHER
REGULATORY INFORMATION 1,2,3,7,8,9,10.

05/90: REVISED CHRONIC EFFECT, (DELETE) ONE COMPONENT, (DELETE) ONE
COMPONENT (OTHER REGULATORY ORINFO4, ORINFO5).

06/90: ADDED SYNONYM.

08/90: ADDED: HAZARDOUS COMPONENT

09/90: ADDED: PERSONAL PROTECTION (PROTECTIVE CLOTHING)

