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SDS

**Common Name:** CHLORINATED POLYVINYL CHLORIDE/ SOLVENT MIXTURE**Manufacturer:** E-Z WELD**SDS Revision Date:** 6/11/2015**SDS Format:** GHS-US**Grainger Item Number(s):** 1RG51, 1RG52, 1RG53, 1RG63, 1RG64, 3NZD8, 3NZD9, 3NZE1, 3NZE2, 5E532, 5E533, 5E534, 5E535, 5E536**Manufacturer Model Number(s):****SDS Table of Contents**

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E-Z WELD(R\*)

SAFETY DATA SHEET

PREPARED ACCORDING TO OSHA, GHS AND ANSI Z400.1-2004 STANDARDS

**1. PRODUCT AND COMPANY INFORMATION** top

PRODUCT/CHEMICAL NAME: CHLORINATED POLYVINYL CHLORIDE/ SOLVENT MIXTURE

**TRADE NAMES:**

GRAINGER LOW VOC CPVC CEMENT PRODUCTS LOW VOC 907 CPVC CEMENT MEDIUM BODY/ ORANGE, 908 LOW VOC MULTIPURPOSE CEMENT MEDIUM BODY/ AMBER, 227/ 927 LOW VOC FLOWGUARD GOLD(R\*) CPVC ONE-STEP MEDIUM BODY/ YELLOW

RECOMMENDED USE: SOLVENT CEMENT FOR CPVC MATERIALS

**PRODUCT PART NUMBER(S):**

907-90702 (3NZD9), 90703 (3NZE1), 90704 (3NZE2); 908-90802 (5E532), 90803 (5E533), 90804 (5E534); 227-22702 (1RG63), 22703 (1RG64); 927- 92704

(3NZD8)

MANUFACTURER:  
E-Z WELD GROUP,  
LLC 1661 OLD DIXIE HWY,  
RIVIERA BEACH, FL 33404

PHONE: (281) 351-9889

FAX: (281) 351-9896

WWW.E-ZWELD.COM

IN CASE OF EMERGENCY:

CHEMTREC:  
1-800-424-9300 (U.S. AND CANADA)  
1-703-527-3887 (INTERNATIONAL)

## 2. HAZARDS IDENTIFICATION

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APPEARANCE: PRODUCT COMES IN A VARIETY OF COLORS.

ODOR: ETHER-LIKE

GHS SYMBOLS:

FLAME  
SKULLS AND CROSSBONES

SIGNAL WORD: DANGER

HAZARD CLASSIFICATION:

FLAMMABLE LIQUIDS: CATEGORY 2

PRESUMED TO BE HARMFUL TO HUMAN HEALTH: CATEGORY 2

HAZARD STATEMENTS:

EXTREMELY FLAMMABLE LIQUID AND VAPORS.  
TOXIC IN CASE OF INHALATION OR INGESTION.  
HARMFUL IN CONTACT WITH SKIN.  
DO NOT BREATHE VAPORS.

PRECAUTIONARY STATEMENTS:

KEEP OUT OF REACH OF CHILDREN.

READ LABEL BEFORE USE.

KEEP AWAY FROM HEAT/ SPARKS/ OPEN FLAMES/ HOT SURFACES- DO NOT SMOKE.

USE ONLY IN OPEN AIR AND WELL-VENTILATED PLACES.

IF ON SKIN (OR HAIR):

REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.

IF INHALED:

REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING.

IF IN EYES:

RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES,

IF PRESENT AND EASY TO DO. CONTINUE RINSING.

IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ ATTENTION.

IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ ATTENTION.

IN CASE OF FIRE:

USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION.

DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

PRINCIPAL HAZARDS:

SKIN OR EYES:

CONTACT WITH THIS PRODUCT CAN BE IRRITATING TO CONTAMINATED SKIN AND EYES. VAPORS OF THIS PRODUCT CAN REDDEN AND IRRITATE THE EYES. IF THE EYES ARE CONTAMINATED WITH SPLASHES, SPRAYS OR MISTS OF THIS PRODUCT, REDDENING TEARING, AND CORNEAL OPACITY CAN OCCUR. THE LIQUID CAN BE MILDLY TO SEVERELY IRRITATING TO CONTAMINATED SKIN (DEPENDING ON DURATION OF EXPOSURE). PROLONGED OR REPEATED SKIN OVER-EXPOSURES CAN LEAD TO DERMATITIS. SKIN ABSORPTION IS A POTENTIAL ROUTE OF OVEREXPOSURE FOR CYCLOHEXANONE (A COMPONENT OF THIS PRODUCT).

INHALATION:

INHALATION OF VAPORS, MISTS, OR SPRAYS OF THIS PRODUCT CAN BE IRRITATING TO THE NOSE, THROAT, MUCOUS MEMBRANES, AND OTHER TISSUES OF THE RESPIRATORY SYSTEM. SYMPTOMS OF OVEREXPOSURE CAN INCLUDE COUGHING, SNEEZING, AND SHORTNESS OF BREATH. ADDITIONALLY, THE COMPONENTS OF THIS PRODUCT ARE CENTRAL NERVOUS SYSTEM DEPRESSANTS. SYMPTOMS OF OVER-EXPOSURE CAN INCLUDE DROWSINESS, DIZZINESS, FATIGUE, HEADACHE, NAUSEA, AND GENERAL ANESTHETIC EFFECTS. INHALATION OF HIGH CONCENTRATIONS OF THIS PRODUCT (AS MAY OCCUR IN A POORLY-VENTILATED AREA) MAY BE FATAL. BASED ON CLINICAL STUDIES INVOLVING TEST ANIMALS, CYCLOHEXANONE AND TETRAHYDROFURAN, COMPONENTS OF THIS PRODUCT, MAY CAUSE LIVER AND KIDNEY DAMAGE AFTER LONG-TERM INHALATION OVEREXPOSURES.

THIS PRODUCT MUST BE USED WITH ADEQUATE VENTILATION. MECHANICAL EXHAUST MAY BE NEEDED. ENSURE EXPOSURE TO VAPORS IS MINIMIZED BY USE OF APPROPRIATE ENGINEERING CONTROLS, WORK PRACTICES, AND PERSONAL PROTECTIVE EQUIPMENT, AS DESCRIBED IN THE REMAINDER OF THIS DOCUMENT.

INGESTION:

INGESTION IS NOT ANTICIPATED TO BE A SIGNIFICANT ROUTE OF OCCUPATIONAL OVEREXPOSURE FOR THIS PRODUCT. IF INGESTION OCCURS, REFER TO SECTION 4 (FIRST-AID MEASURES) AND GET MEDICAL HELP IMMEDIATELY. IF INGESTION OF THIS PRODUCT DOES OCCUR, SYMPTOMS OF SUCH OVER-EXPOSURE CAN INCLUDE NAUSEA, VOMITING, AND OTHER SYMPTOMS DESCRIBED FOR "INHALATION". INGESTION CAN ALSO LEAD TO LIVER AND KIDNEY DAMAGE. INGESTION OF THIS PRODUCT MAY BE FATAL.

INJECTION:

INJECTION IS NOT ANTICIPATED TO BE A SIGNIFICANT ROUTE OF OVER-EXPOSURE FOR THIS PRODUCT. IF INJECTION DOES OCCUR (I.E. THROUGH A PUNCTURE BY AN OBJECT CONTAMINATED WITH THE PRODUCT), LOCAL IRRITATION AND SWELLING CAN OCCUR. ADDITIONAL SYMPTOMS MAY INCLUDE THOSE DESCRIBED FOR "INHALATION".

SEE SECTION 11 FOR COMPLETE HEALTH HAZARD INFORMATION

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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HAZARDOUS INGREDIENTS:

CAS NUMER	INGREDIENT/ CHEMICAL NAME	PERCENT BY WEIGHT
109-99-9	TETRAHYDROFURAN	20 - 50
78-93-3	METHYL ETHYL KETONE	10 - 40
68648-82-8	CHLORINATED POLYVINYL CHLORIDE RESIN	<25
108-94-1	CYCLOHEXANONE	5 - 25
67-64-1	ACETONE	0 - 20
112945-52-5	SILICON DIOXIDE	<3
106-88-7	1,2 BUTYLENE DIOXIDE	<1

#### 4. FIRST AID MEASURES

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##### EYE CONTACT:

IF THIS PRODUCT'S LIQUID OR VAPORS ENTER THE EYES, OPEN VICTIM'S EYES WHILE UNDER GENTLY RUNNING WATER. USE SUFFICIENT FORCE TO OPEN EYELIDS. HAVE VICTIM "ROLL" EYES. MINIMUM FLUSHING IS FOR 15 MINUTES. THE CONTAMINATED INDIVIDUAL MUST SEEK IMMEDIATE MEDICAL ATTENTION.

##### SKIN CONTACT:

IF THIS PRODUCT CONTAMINATES THE SKIN, IMMEDIATELY BEGIN DECONTAMINATION WITH RUNNING WATER. MINIMUM FLUSHING IS FOR 15 MINUTES. REMOVE EXPOSED OR CONTAMINATED CLOTHING, TAKING CARE NOT TO CONTAMINATE EYES. THE CONTAMINATED INDIVIDUAL MUST SEEK MEDICAL ATTENTION IF ANY ADVERSE EFFECT OCCURS.

##### INHALATION:

IF VAPORS, MISTS, OR SPRAYS OF THIS PRODUCT ARE INHALED, REMOVE VICTIM TO FRESH AIR. IF NECESSARY, USE ARTIFICIAL RESPIRATION TO SUPPORT VITAL FUNCTIONS. REMOVE OR COVER GROSS CONTAMINATION TO AVOID EXPOSURE TO RESCUERS.

##### INGESTION:

IF THIS PRODUCT IS SWALLOWED, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. IF PROFESSIONAL ADVICE IS NOT AVAILABLE, DO NOT INDUCE VOMITING. THE CONTAMINATED INDIVIDUAL SHOULD DRINK MILK, EGG WHITES, OR LARGE QUANTITIES OF WATER. NEVER INDUCE VOMITING OR GIVE DILUENTS (MILK OR WATER) TO SOMEONE WHO IS UNCONSCIOUS, HAVING CONVULSIONS, OR UNABLE TO SWALLOW.

THE CONTAMINATED INDIVIDUAL MUST BE TAKEN FOR MEDICAL ATTENTION, ESPECIALLY IF ANY ADVERSE EFFECT OCCURS. RESCUERS SHOULD BE TAKEN FOR MEDICAL ATTENTION, IF NECESSARY. TAKE A COPY OF LABEL AND MSDS TO HEALTH PROFESSIONAL WITH VICTIM.

#### 5. FIRE FIGHTING MEASURES

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##### FLASH POINT:

METHYL ETHYL KETONE: -9 DEG. C (15 DEG. F)  
TETRAHYDROFURAN: -15.5 DEG. C (4.1 DEG. F)

##### EXTINGUISHING MEDIA:

FOAM, CO<sub>2</sub> OR DRY CHEMICAL. COOL FIRE EXPOSED CONTAINER WITH WATER.

**FIRE-FIGHTING INSTRUCTIONS:**

INCIPIENT FIRE RESPONDERS SHOULD WEAR EYE PROTECTION. STRUCTURAL FIREFIGHTERS MUST WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT. IF IT IS SAFE TO DO SO, ALLOW SMALL FIRES INVOLVING THIS PRODUCT TO BURN-OUT, WHILE PROTECTING EXPOSURES. IF POSSIBLE, PREVENT RUNOFF WATER FROM ENTERING STORM DRAINS, BODIES OF WATER, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. IF NECESSARY, RINSE CONTAMINATED EQUIPMENT THOROUGHLY BEFORE RETURNING SUCH EQUIPMENT TO SERVICE.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:**

THIS IS A CLASS I-B FLAMMABLE LIQUID. WHEN INVOLVED IN A FIRE, THIS MATERIAL MAY IGNITE AND PRODUCE IRRITATING VAPORS AND TOXIC GASES (E.G., CARBON MONOXIDE, CARBON DIOXIDE). THIS MATERIAL WILL READILY IGNITE AT ROOM TEMPERATURE. THE VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO A SOURCE OF IGNITION, AND FLASH BACK TO A LEAK OR OPEN CONTAINER. TETRAHYDROFURAN CAN FORM POTENTIALLY EXPLOSIVE PEROXIDES; CLOSED CONTAINERS CONTAMINATED WITH PEROXIDES CAN RUPTURE VIOLENTLY IN THE HEAT OF A FIRE. ANOTHER COMPONENT, 1,2-BUTYLENE OXIDE, CAN UNDERGO HAZARDOUS POLYMERIZATION.

EXPLOSION SENSITIVITY TO MECHANICAL IMPACT: NOT SENSITIVE.

**EXPLOSION SENSITIVITY TO STATIC DISCHARGE:**

THE VAPORS OF THIS PRODUCT CAN BE IGNITED BY STATIC ELECTRICAL ENERGY.

**6. ACCIDENTAL RELEASE MEASURES**

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**SPILL /LEAK PROCEDURES:**

IN CASE OF A SPILL, CLEAR THE AFFECTED AREA AND PROTECT PEOPLE. UNCONTROLLED RELEASES SHOULD BE RESPONDED TO BY TRAINED PERSONNEL USING PRE-PLANNED PROCEDURES. PROPER PROTECTIVE EQUIPMENT SHOULD BE USED. SMALL RELEASES (E.G., 1-PINT) MUST BE CLEANED-UP BY PERSONNEL WEARING GLOVES, GOGGLES, AND APPROPRIATE EYE PROTECTION. FACE SHIELDS MUST BE WORN IF SPLASHES OR SPRAYS OF THIS PRODUCT MAY BE GENERATED. IN THE EVENT OF A NON-INCIDENTAL RELEASE (E.G., FIVE, 1-GALLON CONTAINERS LEAKING SIMULTANEOUSLY IN A POORLY-VENTILATED AREA), THE MINIMUM PERSONAL PROTECTIVE EQUIPMENT SHOULD BE LEVEL B: TRIPLE-GLOVES (RUBBER GLOVES AND NITRILE GLOVES, OVER LATEX GLOVES), CHEMICALLY RESISTANT SUIT AND BOOTS, HARD-HAT, AND SELF-CONTAINED BREATHING APPARATUS. LEVEL B SHOULD ALWAYS BE USED DURING RESPONSES IN WHICH THE OXYGEN LEVEL IS BELOW 19.5% OR UNKNOWN.

**WASTE DISPOSAL METHOD:**

DISPOSE OF IN ACCORDANCE WITH U.S. FEDERAL, STATE, OR LOCAL PROCEDURES, THE APPLICABLE STANDARDS OF CANADA AND ITS PROVINCES, OR THE APPROPRIATE REQUIREMENTS OF EUROPEAN COMMUNITY MEMBER STATES (SEE SECTION 13, DISPOSAL CONSIDERATIONS).

**CLEANUP:**

ELIMINATE ALL SOURCES OF IGNITION BEFORE SPILL CLEAN-UP BEGINS. USE NON-SPARKING TOOLS. ABSORB SPILLED LIQUID WITH ACTIVATED CARBON, POLYPADS OR OTHER SUITABLE ABSORBENT MATERIALS. MONITOR THE AREA FOR COMBUSTIBLE VAPORS AND THE LEVEL OF OXYGEN. MONITORING MUST INDICATE LESS THAN 10% OF THE LEL (SEE SECTION 5, FIRE- FIGHTING MEASURES) AND GREATER THAN 19.5 % OXYGEN IS IN THE ATMOSPHERE BEFORE PERSONNEL ARE PERMITTED IN THE AREA WITHOUT LEVEL B PROTECTION. PLACE ALL SPILL RESIDUES IN AN APPROPRIATE CONTAINER AND SEAL. PLACE THE BULK OF ANY SPILLED MATERIAL INTO DRUMS.

## **7. HANDLING AND STORAGE**

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:  
KEEP AWAY FROM HEAT, SPARKS AND FLAME. AVOID BREATHING VAPOR.

HANDLING PRECAUTIONS:

ALL EMPLOYEES WHO HANDLE THIS MATERIAL SHOULD BE TRAINED TO HANDLE IT SAFELY. CONTAINERS OF THIS PRODUCT MUST BE PROPERLY LABELED. IF THIS MIXTURE IS USED IN OTHER TYPES OF CONTAINERS, ONLY USE PORTABLE CONTAINERS APPROVED FOR FLAMMABLE LIQUIDS. POST "NO SMOKING" SIGNS, WHERE APPROPRIATE IN STORAGE AND USE AREAS. USE NON-SPARKING TOOLS. BOND AND GROUND DURING TRANSFER OF MATERIAL. EMPTY CONTAINERS MAY CONTAIN RESIDUAL FLAMMABLE LIQUID OR VAPORS. THEREFORE, EMPTY CONTAINERS SHOULD BE HANDLED WITH CARE. DO NOT EXPOSE "EMPTY" CONTAINERS TO WELDING TOUCHES, OR ANY OTHER SOURCE OF IGNITION.

STORAGE REQUIREMENTS:

STORE CONTAINERS OF THE PRODUCT IN A COOL, DRY LOCATION, AWAY FROM DIRECT SUNLIGHT, SOURCES OF INTENSE HEAT, OR WHERE FREEZING IS POSSIBLE. MATERIAL SHOULD BE STORED IN SECONDARY CONTAINERS, OR IN A DESIGNATED AREA, AS APPROPRIATE. STORAGE AREAS SHOULD BE MADE OF FIRE-RESISTANT MATERIALS. INSPECT ALL INCOMING CONTAINERS BEFORE STORAGE, TO ENSURE CONTAINERS ARE PROPERLY LABELED AND NOT DAMAGED. REFER TO NFPA 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE FOR ADDITIONAL INFORMATION ON STORAGE.

## **8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**

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COMPONENT EXPOSURE LIMITS:

TETRAHYDROFURAN (109-99-9):

ACGIH: 50 PPM TWA; 100 PPM STEL

SKIN - POTENTIAL SIGNIFICANT CONTRIBUTION TO OVERALL EXPOSURE BY THE CUTANEOUS ROUTE

OSHA: 200 PPM TWA; 590 MG/M<sub>3</sub> TWA

NIOSH: 200 PPM TWA; 590 MG/M<sub>3</sub> TWA; 250 PPM STEL; 735 MG/M<sub>3</sub> STEL

METHYL ETHYL KETONE (78-93-3):

ACGIH: 200 PPM TWA; 300 PPM STEL

OSHA: 200 PPM TWA; 590 MG/M<sub>3</sub> TWA

NIOSH: 200 PPM TWA; 590 MG/M<sub>3</sub> TWA; 300 PPM STEL; 885 MG/M<sub>3</sub> STEL

CYCLOHEXANONE (108-94-1):

ACGIH: 20 PPM TWA; 50 PPM STEL

SKIN - POTENTIAL SIGNIFICANT CONTRIBUTION TO OVERALL EXPOSURE BY THE CUTANEOUS ROUTE

OSHA: 50 PPM TWA; 200 MG/M<sub>3</sub> TWA

NIOSH: 25 PPM TWA; 100 MG/M<sub>3</sub> TWA

POTENTIAL FOR DERMAL ABSORPTION

ACETONE (67-64-1):

ACGIH: 500 PPM TWA; 750 PPM STEL

OSHA: 1000 PPM TWA; 2400 MG/M<sub>3</sub> TWA

NIOSH: 250 PPM TWA; 590 MG/M<sub>3</sub> TWA

VENTILATION:

MECHANICAL EXHAUST MAY BE NEEDED. IF THE PRODUCT IS USED IN A CONFINED AREA, PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S). EXPLOSION-PROOF EQUIPMENT IS REQUIRED.

RESPIRATORY PROTECTION:

RESPIRATORY PROTECTION IS NOT GENERALLY NEEDED WHEN USING THIS PRODUCT. MAINTAIN AIRBORNE CONTAMINANT CONCENTRATIONS BELOW GUIDELINES LISTED IN THIS SECTION. IF RESPIRATORY PROTECTION IS NEEDED, USE ONLY PROTECTION AUTHORIZED IN 29 CFR 1910.134 OR APPLICABLE STATE REGULATIONS. USE SUPPLIED AIR RESPIRATION PROTECTION IF OXYGEN LEVELS ARE BELOW 19.5% OR ARE UNKNOWN. RESPIRATORY PROTECTION GUIDELINES FOR TETRAHYDROFURAN (A COMPONENT OF THIS PRODUCT) ARE PROVIDED AS FOLLOWS.

NIOSH/OSHA RECOMMENDATIONS FOR TETRAHYDROFURAN CONCENTRATIONS IN AIR UP TO 2000 PPM:

SUPPLIED AIR RESPIRATOR (SAR) OPERATED IN A CONTINUOUS-FLOW MODE, FULL-FACEPIECE CHEMICAL CARTRIDGE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE(S), GAS MASK WITH ORGANIC VAPOR CANISTER, POWERED AIR-PURIFYING RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE(S), FULL-FACEPIECE SELF-CONTAINED BREATHING APPARATUS (SCBA), OR FULL-FACEPIECE SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:

POSITIVE PRESSURE, FULL-FACEPIECE SCBA OR POSITIVE PRESSURE, FULL-FACEPIECE SAR WITH AN AUXILIARY POSITIVE PRESSURE SCBA.

ESCAPE: GAS MASK WITH ORGANIC VAPOR CANISTER OR ESCAPE-TYPE SCBA.

NOTE:

THE IDLH CONCENTRATION FOR TETRAHYDROFURAN IS 2000 PPM. THIS VALUE IS BASED ON THE LOWER EXPLOSIVE LIMIT (LEL). RESPIRATORY PROTECTION EQUIPMENT MAY NOT BE ADEQUATE FOR FIRE SITUATIONS.

PROTECTIVE GLOVES:

WEAR GLOVES FOR ROUTINE INDUSTRIAL USE TO PROTECT HANDS FROM CONTACT. FOR LONG EXPOSURES, OR UNUSUAL CONTACT, SUCH AS SPILL CLEANUP, CHEMICAL RESISTANT GLOVES MAY BE REQUIRED. SEE SECTION 6.

EYE PROTECTION:

SPLASH GOGGLES OR SAFETY GLASSES. FACE SHIELD SHOULD BE WORN WHEN WORKING IN SITUATIONS IN WHICH SPLASHES OR SPRAYS CAN BE GENERATED. CONTACT LENSES ARE NOT EYE PROTECTIVE DEVICES. APPROPRIATE EYE PROTECTION MUST BE WORN INSTEAD OF, OR IN CONJUNCTION WITH CONTACT LENSES.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

USE BODY PROTECTION APPROPRIATE FOR TASK (E.G., APRON OR TYVEK SUIT).

OTHER/HYGIENIC PRACTICES:

WASH WITH SOAP AND WATER AFTER USE. NEVER EAT OR DRINK IN WORK AREAS. PRACTICE GOOD PERSONAL HYGIENE AFTER USING THIS MATERIAL, ESPECIALLY BEFORE EATING, DRINKING, SMOKING, USING THE TOILET, OR APPLYING COSMETICS.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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APPEARANCE: PRODUCT COMES IN A VARIETY OF COLORS.

PHYSICAL STATE: LIQUID

ODOR: ETHER-LIKE

ODOR THRESHOLD: 2.48 - 3.47 PPM (TETRAHYDROFURAN)

PH: NOT DETERMINED

FREEZING POINT: NOT DETERMINED

MELTING POINT: NOT DETERMINED

BOILING POINT AND BOILING RANGE: NOT DETERMINED

FLASH POINT:

METHYL ETHYL KETONE: -9 DEG. C (15 DEG. F)

TETRAHYDROFURAN: -15.5 DEG. C (4.1 DEG. F)

EVAPORATION RATE (N-BUTYL ACETATE): >1

FLAMMABILITY: NFPA CLASS IB

VAPOR PRESSURE: NOT DETERMINED

SPECIFIC GRAVITY (H<sub>2</sub>O=1, AT 4 DEG. C): < 1.0

WATER SOLUBILITY: SOMEWHAT SOLUBLE.

PARTITION COEFFICIENT (N-OCTANOL/ WATER): NOT DETERMINED

AUTO-IGNITION TEMPERATURE:

METHYL ETHYL KETONE: 404 DEG. C (759 DEG. F)

TETRAHYDROFURAN: 321 DEG. C (610 DEG. F)

DECOMPOSITION TEMPERATURE: NOT DETERMINED

VISCOSITY: NOT AVAILABLE

## **10. STABILITY AND REACTIVITY**

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STABILITY:

STABLE AT ROOM TEMPERATURE IN CLOSED CONTAINERS UNDER NORMAL STORAGE AND HANDLING CONDITIONS.

NOTE:

TETRAHYDROFURAN, A COMPONENT OF THIS PRODUCT, CAN FORM POTENTIALLY EXPLOSIVE PEROXIDE COMPOUNDS WHEN EXPOSED TO LIGHT OR AIR. THOUGH THIS PRODUCT CONTAINS INHIBITORS TO PREVENT PEROXIDE FORMATION, CARE SHOULD BE USED WHEN STORING THIS PRODUCT, OR HANDLING OLD CONTAINERS OF THIS MATERIAL.

CONDITIONS TO AVOID:

AVOID EXPOSURE OR CONTACT TO EXTREME TEMPERATURES, SOURCES OF IGNITION, INCOMPATIBLE CHEMICALS.

INCOMPATIBLE MATERIALS:

THIS PRODUCT WILL NOT BE COMPATIBLE WITH STRONG OXIDIZERS, LITHIUM ALUMINUM HYDRIDE, AND ALKALINE EARTH HYDROXIDES.

POLYMERIZATION:

A COMPONENT OF THIS PRODUCT, 1,2-BUTYLENE OXIDE, MAY UNDERGO HAZARDOUS POLYMERIZATION. HOWEVER, AT THE CONCENTRATION PRESENT IN THIS MIXTURE, POLYMERIZATION IS NOT EXPECTED TO PRESENT A SIGNIFICANT HAZARD.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE, SILICON AND CHLORIDE COMPOUNDS.

## 11. TOXICOLOGICAL INFORMATION

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ACUTE EXPOSURE:

COMPONENT ANALYSIS (LD50 / LC50):

TETRAHYDROFURAN (CAS# 109-99-9):

INHALATION-RAT LC50: 21,000 PPM/3H  
ORAL-RAT LD50: 1650 MG/KG.

METHYL ETHYL KETONE (CAS# 78-93-3):

ORAL-RAT LD50: 2737 MG/KG,  
INHALATION-RAT LC50: 23,500 MG/M3/8HR  
INHALATION-MOUSE LC50: 40 G/M3/2HR

CYCLOHEXANONE (CAS# 108-94-1):

INHALATION-RAT LC50: 8000 PPM/4 HOURS  
ORAL-RAT LD50: 1535 MG/KG,  
ORAL-MOUSE LD50: 1400 MG/KG

SILICON DIOXIDE (CAS# 112945-52-5):

ORAL-RAT LD50: 3160 MG/KG

EYE IRRITATION: CAN CAUSE IRRITATION, TEARING AND BLURRED VISION.

SKIN IRRITATION: CAN CAUSE IRRITATION, REDNESS AND DEFATTING (DRYNESS).

INGESTION HEALTH RISKS:

CAUSES NAUSEA, HEADACHE, DIZZINESS, STUPOR, AND /OR DIARRHEA. INGESTION OF THIS PRODUCT AT HIGH CONCENTRATION MAY BE FATAL.

RESPIRATORY IRRITATION: CAN CAUSE RESPIRATORY IRRITATION AND HEADACHE.

DERMAL TOXICITY: SEVERE IRRITATION AND DEFATTING. CAN CAUSE A RASH.

INHALATION TOXICITY:

INHALATION OF PRODUCT'S VAPORS AT HIGH CONCENTRATIONS MAY BE FATAL

TARGET ORGANS: SKIN, EYES, RESPIRATORY SYSTEM, CENTRAL NERVOUS SYSTEM.

CHRONIC EXPOSURE:

CHRONIC TOXICITY:

PROLONGED OR REPEATED SKIN EXPOSURES CAN LEAD TO DERMATITIS (DRYNESS, REDDENING AND IRRITATION OF THE SKIN). TETRAHYDROFURAN, A COMPONENT OF THIS PRODUCT, MAY CAUSE LIVER AND KIDNEY DAMAGE AFTER LONG-TERM INHALATION OVEREXPOSURES. THERE IS LIMITED EVIDENCE FROM ANIMAL STUDIES THAT METHYL ETHYL KETONE, A COMPONENT OF THIS PRODUCT, IS A REPRODUCTIVE TOXIN.

TARGET ORGANS: LIVER, KIDNEYS.

CARCINOGENICITY:

TETRAHYDROFURAN (CAS# 109-99-9) :

ACGIH: A3 - CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS

ACETONE (CAS# 67-64-1) :

ACGIH: A4 - NOT CLASSIFIABLE AS A HUMAN CARCINOGEN

CYCLOHEXANONE (CAS# 108-94-1) :

ACGIH:

A3 - CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS

IARC:

MONOGRAPH 71 [1999]; MONOGRAPH 47 [1989] (GROUP 3 (NOT CLASSIFIABLE))

SILICON DIOXIDE (CAS# 112945-52-5) :

IARC:

MONOGRAPH 68 [1997] (LISTED UNDER AMORPHOUS SILICA) (GROUP 3 (NOT CLASSIFIABLE))

MUTAGENICITY:

THIS PRODUCT IS NOT REPORTED TO PRODUCE MUTAGENIC EFFECTS IN HUMANS. HUMAN MUTATION DATA ARE AVAILABLE FOR CYCLOHEXANONE (A COMPONENT OF THIS PRODUCT); THESE DATA WERE OBTAINED ON SPECIFIC HUMAN TISSUES EXPOSED TO RELATIVELY HIGH DOSES. ANIMAL MUTATION DATA ARE AVAILABLE FOR METHYL ETHYL KETONE, SILICON DIOXIDE, AND TETRAHYDROFURAN (COMPONENTS OF THIS PRODUCT); THESE DATA WERE OBTAINED DURING CLINICAL STUDIES ON SPECIFIC ANIMAL TISSUES OR MICRO- ORGANISMS EXPOSED TO HIGH DOSES OF THESE COMPOUNDS.

REPRODUCTIVE TOXICITY:

THIS PRODUCT IS NOT REPORTED TO CAUSE REPRODUCTIVE EFFECTS IN HUMANS. REPRODUCTIVE TOXICITY DATA ARE AVAILABLE FOR 1,2-BUTYLENE OXIDE, METHYL ETHYL KETONE AND TETRAHYDROFURAN (COMPONENTS OF THIS PRODUCT); THESE DATA WERE OBTAINED FROM CLINICAL STUDIES ON TEST ANIMALS EXPOSED TO RELATIVELY HIGH DOSES.

TERATOGENICITY:

THIS PRODUCT IS NOT REPORTED TO CAUSE TERATOGENIC EFFECTS IN HUMANS. THREE ANIMAL STUDIES INVOLVING METHYL ETHYL KETONE (A COMPONENT OF THIS PRODUCT) HAVE SHOWN FETOTOXICITY (SKELETAL ANOMALIES) AT DOSES WHICH DID NOT PRODUCE SIGNIFICANT MATERNAL TOXICITY.

## 12. ECOLOGICAL INFORMATION

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ENVIRONMENTAL TOXICITY:

AQUATIC LIFE TOXICITY:

THIS PRODUCT CAN BE HARMFUL OR FATAL TO CONTAMINATED AQUATIC PLANT OR ANIMAL LIFE, ESPECIALLY IF RELEASED IN LARGE QUANTITY IN A BODY OF WATER. THE FOLLOWING AQUATIC TOXICITY DATA ARE AVAILABLE FOR THE COMPONENTS OF THIS PRODUCT:

CYCLOHEXANONE:

LC50 (PIMEPHALES PROMELAS FATHEAD MINNOW) 527 MG/L 96 HOURS

EC0 (BACTERIA PSEUDOMONAS PUTIDA) 16 HOURS = 180 MG/L  
EC0 (ALGAE MICROCYSTIS AERUGINOSA) 8 DAYS = 52 MG/L  
EC0 (GREEN ALGAE SCENEDESMUS QUADRICAUDA) 7 DAYS = 370 MG/L  
EC0 (PROTOZOA ENTOSIPHON SULCatum) 72 HOURS = 545 MG/L  
EC0 (PROTOZOA URONEMA PARDUCZI CHATTON-LWOFF) = 280 MG/L  
EC0 (BACTERIA PSEUDOMONAS FLUORESCENS) 16 HOURS = 180 MG/L (PH = 7)  
EC0 (CHILOMONAS PARAMECIUM EHRENBURG) 48 HOURS = 573 MG/L  
EC0 (DAPHNIA MAGNA STRAUS) 24 HOURS = 526 MG/L  
EC50 (DAPHNIA MAGNA STRAUS) 24 HOURS = 820 MG/L  
EC100 (DAPHNIA MAGNA STRAUS) 24 HOURS = 1,240 MG/L  
EC0 (DAPHNIA MAGNA) 24 HOURS = 540 MG/L  
EC50 (DAPHNIA MAGNA) 24 HOURS = 800 MG/L  
EC100 (DAPHNIA MAGNA) 24 HOURS = 1,540 MG/L  
LC50 (FATHEAD MINNOW) 96 HOURS = 526; 618; 630 MG/L  
LC50 (LEUCISCUS IDUS) 24 HOURS = 538 MG/L  
LC50 (LEUCISCUS IDUS) 96 HOURS = 536; 539; 752 MG/L

METHYL ETHYL KETONE:

EC0 (SCENEDESMUS QUADRICAUDA, GREEN ALGAE) = 4300 MG/L/ 8 DAYS  
EC0 (ENTOSIPHON SULCatum, PROTOZOA) = 190 MG/L/ 72 HOURS  
EC0 (URONEMA PARDUCZI CHATTON-LWOFF, PROTOZOA) = 2830 MG/L  
EC0 (PSEUDOMONAS PUTIDA, BACTERIA) = 1150 MG/L/ 16 HOURS  
LC50 (PIMEPHALES PROMELAS, FATHEAD MINNOW) = 3200 MG/L/96 HOUR  
LD0 (PSEUDOMONAS, BACTERIA) = 2,500 MG/L  
LD0 (SCENEDESMUS, ALGAE) = 12,500 MG/L  
LD0 (COLPODA, PROTOZOA) = 5,000 MG/L  
LC50 (MOSQUITO FISH) = 5,600 MG/L/ 24 96 HOURS  
LC50 (BLUEGILL) = 5,640 1,690 MG/L/ 24 96 HOURS  
LC50 (GOLDFISH) = 5,000 MG/L/ 24 HOURS

TETRAHYDROFURAN:

GROWTH INHIBITION (MICROCYSTIS, BLUE ALGAE) = 225 MG/L

TOXICITY THRESHOLD (CELL MULTIPLICATION INHIBIT SYSTEM TEST):  
(URONEMA PARDUCZI CHATTON-LWOFF, PROTOZOA) = 858 MG/L (PSEUDOMONAS  
PUTIDA, BACTERIA) = 580 MG/L

(MICROCYTIS AERUGINOSA, ALGEA) = 225 MG/L

LC50 (SILVER/GOLDEN ORFE) = 2820-2930 MG/L

LC50 (FATHEAD MINNOW) = 2160 MG/L/ 96 HOURS

LC50 (CARP) = 4400 MG/L/ 48 HOURS

LC50 (GOLDFISH) = 2400 MG/L/ 48 HOUR

#### ENVIRONMENTAL DATA:

##### Biodegradation:

The components of this product will biodegrade into other organic compounds.

Environmental data are available for components of this product, as follows:

##### ACETONE:

Log KOW = -0.24. Water solubility= miscible. Acetone is quite readily degraded in the environment. BO D = 122%; 5 day S. The potential for bioconcentration in fish is negligible. One experimental study of bioconcentration in adult haddock at 7-9 deg. C (static test) resulted in a BCF of 0.69.

##### CYCLOHEXANONE:

KOC = 0.81. Water solubility 23,000 MG/L. Cyclohexanone is not rapidly volatilized from water, except for fast moving streams or very shallow ponds. Significant soil leaching occurs, contributing to ground water contamination. Biodegradation and photolysis occur in water. Rapid atmospheric degradation occurs via photolysis, with a half-life of about 1 to 5 days.

##### METHYL ETHYL KETONE:

Log KOW = 0.29. Water solubility = 239,000 MG/L. Methyl ethyl ketone is rapidly volatilized from water and undergoes slow biodegradation. It undergoes moderate atmospheric photodegradation.

##### TETRAHYDROFURAN:

Water solubility = 30% (25 deg. C). Tetrahydrofuran is significantly biodegraded in standard tests. This compound is not expected to bioconcentrate in fish significantly.

SOIL MOBILITY: NOT DETERMINED

##### VOC INFORMATION:

This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist. Max. VOC level for E-Z WELD 907, 908, 227 and 927: 490 G/L AS PER SCAQMD TEST METHOD 1168/316A.

## 13. DISPOSAL CONSIDERATIONS

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##### WASTE DISPOSAL:

Waste disposal must be in accordance with appropriate U.S. federal, state, and local regulations, those of Canada and its provinces, as well as those applicable to the EC member states. This product, if unaltered by use, may

BE DISPOSED OF BY TREATMENT AT A PERMITTED FACILITY OR AS ADVISED BY YOUR LOCAL HAZARDOUS WASTE REGULATORY AUTHORITY.

U.S. EPA WASTE NUMBER: D001 (CHARACTERISTIC/IGNITABILITY)

## 14. TRANSPORT INFORMATION

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FOR GREATER THAN 1 LITER (0.3 GAL):

SHIPPING NAME: ADHESIVES

UN NUMBER: 1133

TRANSPORT HAZARD CLASS/ PACKING GROUP:  
CLASS 3 (FLAMMABLE LIQUID), GROUP II DOT LABEL(S)

REQUIRED LABELS: FLAMMABLE LIQUID

FOR LESS THAN 1 LITER (0.3 GAL):

SHIPPING NAME: ADHESIVES

UN NUMBER: 1133

TRANSPORT HAZARD CLASS/ PACKING GROUP:  
CLASS 3 (FLAMMABLE LIQUID), GROUP II DOT LABEL(S)

REQUIRED LABELS: NONE (LIMITED QUANTITIES ARE EXPECTED FROM LABELING)

MARINE POLLUTANT: N

IMDG CODE: 3230

## 15. REGULATORY INFORMATION

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U.S. FEDERAL REGULATIONS:

COMPONENT ANALYSIS:

THE COMPONENTS OF THIS PRODUCT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTIONS 302, 304, AND 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT, AND ARE LISTED AS FOLLOWS:

CHEMICAL NAME	SARA 304 (40 CFR TABLE 302.4)	SARA 313 (40 CFR 372.65)
1,2-BUTYLENE OXIDE (CAS#106-88-7)	YES	YES
CYCLOHEXANONE (CAS# 108-94-1)	YES	YES
METHYL ETHYL KETONE (CAS# 78-93-3)	YES	YES
TETRAHYDROFURAN (CAS# 109-99-9)	YES	NO

U.S. CERCLA REPORTABLE QUANTITY ( RQ):

1,2-BUTYLENE OXIDE = 100 LB; CYCLOHEXANONE = 5000 LB;  
MEK: 5000 LB; TETRAHYDROFURAN = 1000 LB.

TSCA:

ALL INGREDIENTS CONTAINED IN THIS PRODUCT ARE LISTED ON THE U.S. EPA TSCA CHEMICAL SUBSTANCE INVENTORY.

STATE REGULATIONS:

THE FOLLOWING COMPONENTS APPEAR ON ONE OR MORE OF THE FOLLOWING STATE HAZARDOUS SUBSTANCES LIST:

CHEMICAL NAME	CAS	AK	CA	FL	IL	KS	MA	MN	MO	NJ
TETRAHYDROFURAN	109-99-9	Y	Y	Y	Y	Y	Y	Y	Y	Y
METHYL ETHYL KETONE	78-93-3	Y	Y	Y	Y	Y	Y	Y	Y	Y
CYCLOHEXANONE	108-94-1	Y	Y	Y	Y	Y	Y	Y	Y	Y
1,2-BUTYLENE OXIDE	106-88-7	N	N	N	N	Y	Y	N	N	Y

CHEMICAL NAME	ND	PA	RI	TX	WV	WI
TETRAHYDROFURAN	Y	Y	Y	Y	Y	Y
METHYL ETHYL KETONE	Y	Y	Y	Y	Y	Y
CYCLOHEXANONE	Y	Y	Y	Y	Y	Y
1,2-BUTYLENE OXIDE	N	Y	Y	N	N	N

CALIFORNIA, SAFE DRINKING WATER AND TO XIC ENFORCEMENT ACT (PROPOSITION 65):

THIS PRODUCT MAY CONTAIN TRACE CONSTITUENTS, SUCH AS VINYL CHLORIDE, PRESENT IN ONE OF THE PRODUCT'S COMPONENTS. UNDER COMMON USAGE, EXPOSURES TO THESE TRACE CONSTITUENTS AT LEVELS EXCEEDING THE "NO SIGNIFICANT RISK LEVEL" (NSRL) WOULD NOT OCCUR. USERS ARE EXPECTED TO FOLLOW NORMAL PPE AND VENTILATION GUIDELINES SUCH AS THOSE IN SECTION 8 AND OTHER PORTIONS OF THIS MSDS.

CANADIAN FEDERAL REGULATIONS:

THE COMPONENTS OF THIS PRODUCT ARE ON THE DSL INVENTORY.

WHMIS SYMBOLS:

CLASS B2: FLAMMABLE LIQUID

CLASS D2A/B: MATERIALS CAUSING OTHER TOXIC EFFECTS.

EINECS:

ALL INGREDIENTS CONTAINED IN THIS PRODUCT ARE LISTED ON THE EUROPEAN INVENTORY OF EXISTING CHEMICAL SUBSTANCES (EINCS). BASED ON THE INFORMATION ON THE PRODUCT'S COMPONENTS AND AN ASSESSMENT OF THE PHYSICAL AND HEALTH HAZARDS ASSOCIATED WITH THE MATERIAL, THE FOLLOWING ASSIGNMENTS HAVE BEEN MADE (PER COUNCIL DIRECTIVE 67/548/EEC)

EC CLASSIFICATION:

HIGHLY FLAMMABLE; CARCINOGENIC CATEGORY 3; HARMFUL; IRRITANT.  
[F;CARC.CAT.3;XN;XI]

EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOLS:  
EXTREMELY OR HIGHLY FLAMMABLE  
HARMFUL OR IRRITANT

EINECS COMPONENTS:

PRIMARY COMPONENTS OF THIS PRODUCT UNDER EUROPEAN COMMUNITY REGULATION ARE TETRAHYDROFURAN, METHYL ETHYL KETONE, CYCLOHEXANONE AND ACETONE.

**16. OTHER INFORMATION**

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PREPARED BY: KARLA A. TORRUELLAS, TECHNICAL MANAGER

PREPARATION/ REVISION DATE: JUNE 11, 2015

REVISION SUMMARY: REVISION # 2

KEY/LEGEND:

EPA = ENVIRONMENTAL PROTECTION AGENCY;

TSCA = TOXIC SUBSTANCE CONTROL ACT;

ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS;

IARC = INTERNATIONAL AGENCY FOR RESEARCH ON CANCER;

NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH;

NTP = NATIONAL TOXICOLOGY PROGRAM;

OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

OTHER INFORMATION:

NFPA AND HMIS:

NFPA HAZARD SIGNAL:

HEALTH 2

FLAMMABILITY 3

REACTIVITY 1

SPECIAL NONE

HMIS HAZARD SIGNAL:

HEALTH 2\*

FLAMMABILITY 3

REACTIVITY 1

PPE G

MANUFACTURER DISCLAIMER:

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.