

*** MATERIAL SAFETY DATA SHEET ***

BOND BREAKER N008-017 (8 oz.)

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DATE OF PREP: 12/27/95

SECTION I

MANUFACTURER : U. V. PROCESS SUPPLY, INC.
ADDRESS : 1229 W. CORTLAND ST.
CHICAGO, IL 60614-4805
TELEPHONE #: (773) 248-0099
EMERGENCY#: (800) 535-5053

PRODUCT CLASS: BLEND
MFG.CODE ID : N008-017 (8 oz.)
TRADE NAME : BOND BREAKER

SECTION II-A HAZARDOUS COMPONENTS

NO.	COMPONENT	EPC#	% BY WT.
1	DICHLOROMETHANE	115	60.00
2	TOLUENE	60	3.00
3	XYLENE (MIXED ISOMERS)	61	10.00
4	ACETONE	260	3.50
5	ALKYLPHENOL ETHOXYLATE	585	2.00
6	METHYL ALCOHOL	130	20.00

- COMPONENT NUMBER 1 IS A CARCINOGEN OR A POSSIBLE CARCINOGEN. PLEASE REFER TO APPRPRATE REFERENCE SOURCES FOR CARCINOGENICITY INFORMATION. (N/A = NOT APPLICABLE)

SECTION II-B OCCUPATIONAL EXPOSURE LIMITS

NO.	(OSHA) PEL/TWA	PEL/CEILING
1	500ppm	1000ppm
2	100.000ppm	N/E
3	100.000ppm	N/E
4	750.000ppm	N/E
5	NONE	N/E
6	200.000ppm	N/E

NO.	(OSHA) PEL/STEL	SKIN*
1	N/E	N
2	150.000ppm	N
3	150.000ppm	N
4	1000.000ppm	N
5	N/E	N
6	250.000ppm	y

NO.	(ACGIH) TLV/TWA	TLV/CEILING
1	50.000ppm	N/E
2	50.000ppm	N/E
3	100.000ppm	N/E
4	750.000ppm	N/E
5	NONE	N/E
6	200.000ppm	N/E

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NO.	(ACGIH) TLV/STEL	SKIN*
1	N/E	N
2	N/E	Y
3	150.000ppm	N
4	1000.000ppm	N
5	N/E	N
6	250.000ppm	Y

- (SKIN) ABSORPTION MAY CONTRIBUTE TO THE OVERALL EXPOSURE TO THIS MATERIAL. TAKE APPROPRIATE MEASURES TO PREVENT SKIN CONTACT. (Y = YES N = NON/E = NOT ESTABLISHED)

SECTION III PHYSICAL DATA

BOILING POINT . 104 (DEGREES F)

EVAPORATION RATE: < 1 (ETHER = 1) % SOLID : 3.00 (THEORETICAL)

VAPOR DENSITY : > 1 (AIR = 1) WEIGHT PER GALLON : 8.96 (THEORETICAL)

(Boiling point represents boiling point of lowest boiling raw material.)

SECTION IV HEALTH INFORMATION

• EYE CONTACT -

BASED ON THE PRESENCE OF COMPONENT 1 PRODUCT IS PRESUMED TO BE SEVERELY IRRITATING TO THE EYES. EXPOSURE MAY CAUSE EXTENSIVE CORNEAL INJURY. BASED ON THE PRESENCE OF COMPONENTS 2, 3, 4 AND 6 PRODUCT VAPORS AND/OR MISTS MAY ALSO BE IRRITATING TO THE EYES.

• SKIN CONTACT -

BASED ON THE PRESENCE OF COMPONENTS 1 AND 5 PRODUCT IS PRESUMED TO BE MODERATELY IRRITATING TO THE SKIN. PROLONGED CONTACT MAY CAUSE DAMAGE TO THE SKIN. BASED ON THE PRESENCE OF COMPONENT 6 ABSORPTION THROUGH THE SKIN MAY RESULT IN SYMPTOMS OF EXPOSURE AS THOSE DESCRIBED FOR INHALATION AND INGESTION. BASED ON THE PRESENCE OF COMPONENTS 2, 3, 4, 5 AND 6 PROLONGED OR REPEATED CONTACT MAY RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN DERMATITIS.

• INHALATION -

EXPOSURE MAY PRODUCE IRRITATION TO THE NOSE, THROAT, RESPIRATORY TRACT, AND OTHER MUCOUS MEMBRANES. BASED ON THE PRESENCE OF COMPONENTS 1, 2, 3, 4, 5 AND 6 EXPOSURE TO HIGH CONCENTRATIONS OF VAPOR MAY PRODUCE CENTRAL NERVOUS SYSTEM DEPRESSION. BASED ON THE PRESENCE OF COMPONENT 1 EXPOSURE TO HIGH CONCENTRATIONS OF VAPOR MAY PRODUCE CARDIAC ARRHYTHMIAS. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. BASED ON THE PRESENCE OF COMPONENT 1 DUE TO THE HIGH VAPOR PRESSURE OF THIS MATERIAL, AMBIENT VAPOR LEVELS CAN QUICKLY REACH DANGEROUS LEVELS IN SMALL ROOMS OR POORLY VENTILATED AREAS.

• INGESTION -

BASED ON THE PRESENCE OF COMPONENTS 1 AND 6 PRODUCT IS PRESUMED TO BE MODERATELY TOXIC. CONTAINS METHANOL. INGESTION OF AS LITTLE AS 1 TO 4 OUNCES OF METHANOL MAY CAUSE DEATH OR SERIOUS IRREVERSIBLE INJURY SUCH AS BLINDNESS. BASED ON THE PRESENCE OF COMPONENT 1 INGESTION MAY CAUSE LIVER DAMAGE. BASED ON THE PRESENCE OF COMPONENTS 1, 2, 3 AND 4 SMALL AMOUNTS OF THE LIQUID ASPIRATED INTO THE LUNGS DURING INGESTION OR FROM VOMITING MAY RESULT IN SEVERE LUNG DAMAGE. BASED ON THE PRESENCE OF COMPONENT 1 INGESTION MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.

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- **SIGNS AND SYMPTOMS -**

SYMPTOMS OF EYE IRRITATION INCLUDE PAIN, TEARING, REDDENING AND SWELLING. SYMPTOMS OF SKIN IRRITATION INCLUDE REDDENING, SWELLING, RASH AND REDNESS. SYMPTOMS OF RESPIRATORY IRRITATION INCLUDE RUNNY NOSE, SORE THROAT, COUGHING, CHEST DISCOMFORT, SHORTNESS OF BREATH AND REDUCED LUNG FUNCTION. SYMPTOMS OF GASTROINTESTINAL IRRITATION INCLUDE SORE THROAT, ABDOMINAL PAIN, NAUSEA, VOMITING AND DIARRHEA. BASED ON THE PRESENCE OF COMPONENTS 1, 2, 3, 4 AND 6 CENTRAL NERVOUS SYSTEM DEPRESSION MAY BE EVIDENCED BY HEADACHE, DIZZINESS, NAUSEA AND SYMPTOMS OF INTOXICATION; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. SYMPTOMS OF CHRONIC OVEREXPOSURE INCLUDE LOSS OF MEMORY, LOSS OF INTELLECTUAL ABILITY AND LOSS OF COORDINATION.

- **AGGRAVATED MEDICAL CONDITIONS -**

PREEXISTING SKIN, EYE AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. IMPAIRED HEART FUNCTIONS FROM PREEXISTING DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

- **OTHER HEALTH EFFECTS -**

BASED ON THE PRESENCE OF COMPONENT 1 PRODUCT IS PRESUMED TO BE CARCINOGENIC. BASED ON THE PRESENCE OF COMPONENT 1 CHRONIC OVEREXPOSURE MAY CAUSE INJURY TO THE KIDNEYS AND LIVER. BASED ON THE PRESENCE OF COMPONENT 5 TRACE LEVELS ($\ll 0.1$) OF ETHYLENE OXIDE, A SUSPECT CARCINOGEN, MAY BE PRESENT FROM THE PRODUCTION OF THIS COMPONENT. BASED ON THE PRESENCE OF COMPONENT 6 PRODUCT IS PRESUMED TO BE AN ANIMAL MUTAGEN.

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

- **EYE CONTACT -**

IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. SEEK PROMPT MEDICAL ATTENTION.

- **SKIN CONTACT -**

REMOVE CONTAMINATED CLOTHING AND SHOES. WIPE EXCESS FROM SKIN AND FLUSH WITH WATER USING SOAP IF AVAILABLE. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS. DO NOT REUSE CLOTHING UNTIL THOROUGHLY DECONTAMINATE.

- **INHALATION -**

OVEREXPOSURE TO THIS MATERIAL MAY INCREASE THE SENSITIVITY OF THE HEART TO EPINEPHRINE.

- **INGESTION -**

DO NOT INDUCE VOMITING. IF VOMITING SPONTANEOUSLY OCCURS, KEEP THE VICTIM'S HEAD BELOW THE HIPS TO PREVENT ASPIRATION INTO THE LUNGS. SINCE ASPIRATION INTO THE LUNGS CAN CAUSE VERY SERIOUS, PERMANENT DAMAGE, THE DECISION OF WHETHER TO INDUCE VOMITING OR NOT SHOULD BE MADE BY A PHYSICIAN. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING THE STOMACH. CONSULT A PHYSICIAN, HOSPITAL OR POISON CONTROL CENTER AND/OR TRANSPORT TO AN EMERGENCY FACILITY IMMEDIATELY.

- **NOTES FOR PHYSICIAN -**

THE FOLLOWING COMPONENT-SPECIFIC INFORMATION MAY CONTAIN CONTRADICTIONS, AND IS INTENTIONALLY INCLUDED TO GIVE THE ATTENDING PHYSICIAN SPECIFIC INFORMATION ABOUT THE INDIVIDUAL COMPONENTS OF THE BLEND.

- COMPONENTS 2, 3 AND 4 MAY CAUSE SEVERE, PERMANENT DAMAGE IF ASPIRATED AND VOMITING SHOULD NOT BE INDUCED.

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- COMPONENT 6 INGESTION OF AS LITTLE AS 1 TO 4 OUNCES OF METHANOL CAN CAUSE BLINDNESS AND DEATH. ONSET OF SYMPTOMS MAY BE DELAYED FOR 18 TO 24 HOURS; TREATMENT PRIOR TO ONSET OF OBVIOUS SYMPTOMS MAY BE LIFE-SAVING. METHANOL IS RAPIDLY ABSORBED AND EMESIS SHOULD BE INITIATED EARLY TO BE EFFECTIVE, WITHIN 30 MINUTES OF INGESTION, IF POSSIBLE. ADMINISTER SYRUP OF IPECAC. AFTER THE DOSE IS GIVEN, ENCOURAGE PATIENT TO TAKE 6 TO 8 OUNCES OF CLEAR NON-CARBONATED FLUID. DOSE MAY BE REPEATED ONCE IF EMESIS DOES NOT OCCUR WITHIN 20 TO 30 MINUTES. ADMINISTRATION OF AN AQUEOUS SLURRY OF ACTIVATED CHARCOAL WITH MAGNESIUM CIRTATE OR SORBITOL AS A CATHARTIC HAS BEEN REPORTED HELPFUL. ETHANOL INHIBITS THE FORMATION OF TOXIC METABOLITES. IF ETHANOL THERAPY IS INDICATED, ADMINISTER A LOADING DOSE OF 7.6 TO 10 ML/KG OF BODY WEIGHT OF 10% ETHANOL IN D5W OVER 30 TO 60 MINUTES. MAINTENANCE DOSE IS 1.4 ML/KG/HR OF 10% ETHANOL, TO ACHIEVE A 100-130 MG/DL BLOOD ETHANOL LEVEL DURING ETHANOL THERAPY. (IF CHARCOAL IS ADMINISTERED, ETHANOL SHOULD BE ADMINISTERED INTRAVENOUSLY AND NOT ORALLY.)

SECTION VI FIRE AND EXPLOSION HAZARDS

FLASH POINT : > 104 DEGREES F. TCC

- EXTINGUISHING MEDIA -
USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
- SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS -
WARNING. COMBUSTIBLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER CONFINED FIRE SPACE WITHOUT HELMET, FACE SHIELD, BUNKER COAT, GLOVES, RUBBER BOOTS, AND A POSITIVE PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS.
- UNUSUAL FIRE AND EXPLOSION HAZARDS -
CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINERS THAT ARE EXPOSED TO DIRECT FLAME SHOULD BE COOLED WITH WATER TO ELIMINATE STRUCTURAL WEAKENING OF THE CONTAINER'S WALL AND POSSIBLE RUPTURE.

SECTION VII REACTIVITY

STABILITY : STABLE HAZARDOUS POLYMERIZATION : WILL NOT OCCUR

- CONDITIONS AND MATERIALS TO AVOID -
BASED ON THE PRESENCE OF COMPONENTS 2, 3, 4, 5 AND 6 AVOID OXIDIZING MATERIALS. BASED ON THE PRESENCE OF COMPONENT 1 AVOID STRONG ACIDS. BASED ON THE PRESENCE OF COMPONENT 1 AVOID STRONG ALKALIES. BASED ON THE PRESENCE OF COMPONENT 1 AVOID ALKALI METALS. BASED ON THE PRESENCE OF COMPONENT 1 AVOID ALUMINUM AND ITS ALLOYS. BASED ON THE PRESENCE OF COMPONENT 1 AVOID CONTACT WITH ZINC. BASED ON THE PRESENCE OF COMPONENT 3 AVOID CHLORINATED COMPOUNDS.
- HAZARDOUS DECOMPOSITION PRODUCTS -
CHLORINE GAS, HCL AND OTHER CHLORINATED COMPOUNDS , CARBON DIOXIDE, CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION VIII EMPLOYEE PROTECTION

- RESPIRATORY PROTECTION -
USE VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS - AT LEAST 10 AIR CHANGES PER HOUR ARE RECOMMENDED FOR GOOD GENERAL ROOM VENTILATION. IF EXPOSURE EXCEEDS THE PEL/TLV, USE THE APPROPRIATE NIOSH-APPROVED RESPIRATOR.

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- PROTECTIVE CLOTHING -

WEAR SAFETY GLASSES, GOGGLES, OR A SPLASH SHIELD TO PREVENT EYE CONTACT. CONTACT LENSES SHOULD NOT BE WORN. WEAR APPROPRIATE GLOVES AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND CLOTHING.

- ADDITIONAL PROTECTIVE MEASURES -

EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR USE IN AN EMERGENCY.

SECTION IX ENVIRONMENTAL PROTECTION

- SPILL OR LEAK PROCEDURES -

LARGE SPILLS >> EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. IF VAPOR CLOUD FORMS, WATER FOG MAY BE USED TO SUPPRESS; CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTIONS AS ABOVE. SMALL SPILLS >> TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL.

- WASTE DISPOSAL -

OBSERVE ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING PROPER DISPOSAL.

SECTION X ADDITIONAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS, AND FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER POSSIBLE SOURCES OF IGNITION PRIOR TO USE AND UNTIL VAPORS ARE GONE. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM HANDLING SITE. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION. CONTAINERS, EVEN IF EMPTY, CAN CONTAIN EXPLOSIVE VAPORS OR RESIDUES. DO NOT CUT, DRILL, GRIND, OR WELD NEAR CONTAINERS

AFTER CONTACT WITH PRODUCT OR CONTAINER WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES.

UNDER THE PROVISIONS OF TITLE III, SECTION 313 OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR, PART 372, THE FOLLOWING COMPONENTS MAY BE SUBJECT TO REPORTING:

DICHLOROMETHANE (CAS# 000075-09-2)	60.00 WT%
TOLUENE (CAS# 000108-88-3)	3.00 WT%
XYLENE (MIXED ISOMERS) (CAS# 001330-20-7)	10.00 WT%
METHYL ALCOHOL (CAS# 000067-S6-1)	20.00 WT%

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, WE MAKE NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.