GENERAL MSDS ASSISTANCE

877-276-7285

MATERIAL SAFETY DATA SHEET

EQUILON MSDS: 80070E-13

SHELLZONE(R) ALL SEASON ANTI-FREEZE ANTI-BOIL PROTECTION

TELEPHONE NUMBER:

24 HOUR EMERGENCY ASSISTANCE

EQUIVA SERVICES: 877-276-7283

CHEMTREC: 800-424-9300

NAME AND ADDRESS

EQUILON ENTERPRISES LLC PRODUCT STEWARDSHIP P.O. BOX 674414

HOUSTON, TX 77267-4414

SECTION I NAME

PRODUCT: SHELLZONE(R) ALL SEASON ANTI-FREEZE

ANTI-BOIL PROTECTION

CHEM NAME: ETHYLENE GLYCOL

CHEM FAMILY: GLYCOL

SHELL CODE: 32350 94010

HEALTH HAZARD: 3 FIRE HAZARD: 1 REACTIVITY: 0

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NO.	PERCENT
P	SHELLZONE(R) ALL SEASON ANTI-FREEZE	MIXTURE	100
	ANTI-BOIL PROTECTION		
1	ETHYLENE GLYCOL	107-21-1	84-94
2	DIETHYLENE GLYCOL	111-46-6	0-10
3	WATER	7732-18-5	2-4
4	INORGANIC/ORGANIC SALTS		2-4

NFPA HAZARD RATING: HEALTH 1 FIRE 1 REACTIVITY 0

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	4.0 G/KG (RAT)	NONE	NONE
2	14.8 G/KG (RAT)	11.9 G/KG (RAT)	NONE

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT: BASED ON PRESENCE OF COMPONENT 1, PRODUCT IS MODERATELY TO

SEVERELY IRRITATING TO THE EYES. VAPORS CAN ALSO CAUSE SEVERE

EYE IRRITATION.

SKIN CONTACT: BASED ON PRESENCE OF COMPONENTS 1 AND 2, PRODUCT IS MILDLY

IRRITATING TO THE SKIN AND SLIGHTLY TOXIC ON PROLONGED OR

REPEATED CONTACT.

VAPORS ARE MILDLY TO MARKEDLY IRRITATING TO THE LUNGS DEPENDING INHALATION:

ON THE EXPOSURE LEVEL.

INGESTION: PRODUCT MAY BE HARMFUL OR FATAL IF SWALLOWED; MAY PRODUCE CENTRAL

> NERVOUS SYSTEM (CNS) DEPRESSION AND KIDNEY DAMAGE WHICH MAY BE FATAL. INGESTION OF COMPONENT 2 MAY ALSO PRODUCE LIVER DAMAGE.

SIGNS AND SYMPTOMS: IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS

DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE,

DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. KIDNEY DAMAGE MAY BE EVIDENCED BY CHANGES IN URINE OUTPUT, URINE APPEARANCE OR EDEMA

(SWELLING FROM FLUID RETENTION). LIVER DAMAGE MAY BE EVIDENCED BY LOSS OF APPETITE, JAUNDICE (YELLOWISH SKIN COLOR) AND SOMETIMES PAIN IN THE UPPER ABDOMEN ON THE RIGHT SIDE.

AGGRAVATED MEDICAL CONDITIONS:

PREEXISTING SKIN, EYE, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. IMPAIRED KIDNEY AND LIVER FUNCTIONS FROM PREEXISTING DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. OTHER HEALTH EFFECTS:

INTENTIONAL ABUSE, MISUSE OR OTHER MASSIVE EXPOSURE MAY CAUSE MULTIPLE ORGAN DAMAGE AND/OR DEATH.

FOR A SPANISH TRANSLATION OF THIS MSDS, CALL 1-800-240-MSDS.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS				
COMP NO. PEL/TWA	OSHA PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
	50 PPM			
SECTION V		EMERGENCY AND F	IRST AID PROCEDUR	RES
EYE CONTACT:	IMMEDIATELY FLUSH			
SKIN CONTACT:	MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. SKIN CONTACT: FLUSH SKIN WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.			
INHALATION:	REMOVE VICTIM TO F DIFFICULT. GET ME		VIDE OXYGEN IF BR	REATHING IS
INGESTION: DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING 30CC (2 TABLESPOONS) SYRUP OF IPECAC.* IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF VICTIM'S THROAT. KE VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.			O INDUCE PECAC.* IF INDUCE ROAT. KEEP	
NOTE TO PHYSIC	CIAN: *IF VICTIM I AND 15CC (1 AS LOSS OF G	S A CHILD, GIVE TABLESPOON) SYRU AG REFLEX, CONVU		ASS OF WATER SYMPTOMS SUCH CIOUSNESS OCCUR

SECTION VI

SUPPLEMENTAL HEALTH INFORMATION

FOLLOWING INTUBATION WITH A CUFFED ENDOTRACHEAL TUBE.

RARE CASE REPORTS OF ETHYLENE GLYCOL SENSITIZATION (ALLERGY) HAVE BEEN PUBLISHED BUT ALLERGY TO ETHYLENE GLYCOL IS NOT A COMMON PHENOMENON. IN ONE STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED IN THE DIET AT DAILY DOSES UP TO 1.0 G/KG TO PREGNANT RATS, NO MATERNAL TOXICITY, NO EMBRYOTOXICITY NOR TERATOGENICITY WERE OBSERVED. IN A MORE RECENT STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED BY GAVAGE AT DAILY DOSES OF 1.25 G/KG AND ABOVE TO PREGNANT RATS, OR AT 750 MG/KG AND ABOVE TO PREGNANT MICE, THERE WAS AN INCREASE IN THE NUMBER OF MALFORMED FETUSES AT ALL DOSE LEVELS. EXCEPT AT THE LOWEST DOSE LEVEL IN MICE, THERE WAS ALSO EVIDENCE OF MATERNAL TOXICITY AT ALL DOSE LEVELS. IN ONE STUDY, DIETHYLENE GLYCOL ADMINISTERED ORALLY AT HIGH DOSES TO PREGNANT RATS AND MICE CAUSED TOXICITY TO THE EMBRYOFETUS INCLUDING DECREASED FETAL BODY WEIGHTS AND INCREASED VARIATIONS, BUT NO BIRTH DEFECTS WERE OBSERVED. WAS ALSO MATERNAL TOXICITY INCLUDING SOME LETHALITY. IN ANOTHER STUDY, DIETHYLENE GLYCOL ADMINISTERED TO HAMSTERS BY I.P. INJECTION AT DOSES OF 2.5 - 4.48 G/KG ON THE 8TH DAY OF GESTATION RESULTED IN NEURAL TUBE ABNORMALITIES IN ALL DOSE GROUPS BUT NOT IN THE CONTROLS. THERE WAS EVIDENCE OF MATERNAL TOXICITY IN TREATED ANIMALS. UNDER THE CONDITIONS OF THIS STUDY, DEG CAUSED DEVELOPMENTAL EFFECTS IN HAMSTERS. THE SIGNIFICANCE OF THIS

SECTION VII		PHYSICA	L DATA		
BOILING POINT	(DEG F):	SPECFIC GRAVITY	(H2O = 1):	VAPOR PRESSURE	(MM HG):

INFORMATION TO MAN IS UNKNOWN.

MELTING POINT (DEG F):

SOLUBILITY IN WATER:

VAPOR DENSITY (AIR = 1): N/AV

1.1373

COMPLETE

N/AV

>1

POUR POINT = -40 DEG. F

EVAPORATION RATE (NORMAL BUTYL ACETATE = 1):<0.01

APPEARANCE AND ODOR: COLORLESS TO GREEN, SLIGHTLY VISCOUS LIQUID. MILD ODOR. PHYS/CHEM PROPERTIES: SEE ABOVE FOR DETAILS

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD: 246 DEG. F SETAFLASH

FLAMMABLE LIMITS/PERCENT VOLUME IN AIR: LOWER: N/AP HIGHER: N/AP EXTINGUISHING MEDIA:

USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO2.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE IDENTIFIED

SECTION IX

REACTIVITY

HAZARDOUS POLYMERIZATION WILL NOT OCCUR STABLITY: STABLE

CONDITIONS AND MATERIALS TO AVOID:

KEEP AWAY FROM STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING

AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE, NEOPRENE, PVC OR NATURAL RUBBER GLOVES.

ADDITIONAL PROTECTIVE MEASURES:

USE VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES:

MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII

SPECIAL PRECAUTIONS

STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM FLAMES

AND HIGH TEMPERATURES.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

SECTION XIII

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:

CLASS 9 (OTHER REGULATED SUBSTANCES), III

DOT PROPER SHIPPING NAME:OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (CONTAINS ETHYLENE GLYCOL)

OTHER REQUIREMENTS: NA3082, GUIDE 171. REGULATED ONLY IN PACKAGES THAT CONTAIN 5000 LBS. OR GREATER OF ETHYLENE GLYCOL.

SECTION XIV

OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV

STATE REGULATORY INFORMATION

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE AP PLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

STATE LISTED COMPONENT

CAS NO

PERCENT

STATE CODE

ETHYLENE GLYCOL 107-21-1 84-94 CA, CT, FL, IL,
LA, MA, ME, MN,
NJ, PA, RI
DIETHYLENE GLYCOL 111-46-6 0-10 CA, MN, PA, RI

DIETHYLENE GLYCOL

111-46-6

0-10

CA, MN, PA, RI

CA = CALIFORNIA HAZ. SUBST. LIST; CA65C, CA65R, CA65C/R = CALIFORNIA SAFE

DRINKING WATER AND TOXICS ENFORCEMENT ACT OF 1986 OR PROPOSITION 65 LIST; CT =

CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX.

SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST;

ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY

HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ.

SUBST. LIST.

SECTION XVI

SPECIAL NOTES

THIS MSDS REVISION HAS CHANGES IN SECTIONS IV, XIII AND EDS SECTION III. A SPANISH TRANSLATION OF THIS MSDS MAY BE OBTAINED BY CALLING 1-800-240-MSDS.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT DATA. IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

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877-276-7285

IS THE PROPERTY OF EQUIVA SERVICES, LLC AND IS NOT TO BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF EQUIVA SERVICES, LLC.

> ENVIRONMENTAL DATA SHEET EQUILON EDS: 80070E

SHELLZONE (R) ALL SEASON ANTI-FREEZE ANTI-BOIL PROTECTION

TELEPHONE NUMBER:

24 HOUR EMERGENCY ASSISTANCE

GENERAL MSDS ASSISTANCE EQUIVA SERVICES: 877-276-7283

CHEMTREC: 800-424-9300

NAME AND ADDRESS

EQUILON ENTERPRISES PRODUCT STEWARDSHIP

P.O. BOX 674414

HOUSTON, TX 77267-4414

PRODUCT CODE: 94010

SECTION I PRODUCT COMPOSITION					
NO.	COMPOSITION	CAS	PERCENT		
P	SHELLZONE(R) ALL SEASON ANTI-FREEZE ANTI -BOIL PROTECTION	MIXTURE	100		
1	ETHYLENE GLYCOL	107-21-1			
	DIETHYLENE GLYCOL WATER	111-46-6 7732-18-5			
3 4	INORGANIC/ORGANIC SALTS	1132-10-3	2-4		
NFP	A HAZARD RATING: HEALTH 1 FIRE 1	REACTIVITY	0		
SEC	TION II SARA TITLE III INFOR	MATION			
NO.	EHS RQ EHS TPQ SEC-313 313 CATEGORY (*1) (*2) (*3) (*4)	3	11/312 CATEGORY (*5)		
P 1	YES	н	 -1, H-2		
*2 = *3 =	1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC 302 2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302 3 = TOXIC CHEMICAL, SEC 313				
*4 =	= CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM				
*5 :	= CATEGORY (FOR AGGREGATE REPORTING REQUIREMENTS UNDER SARA 311, 312) HEALTH: H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD				
	PHYSICAL: P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD P-5 = REACTIVE HAZARD				

SECTION III

ENVIRONMENTAL RELEASE INFORMATION

EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER WHICH EXCEED THE REPORTABLE QUANTITY MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

THE REPORTABLE QUANTITY (RQ) FOR A RELEASE OF THIS PRODUCT IS 5,319 LBS., WHICH IS BASED ON THE PRESENCE OF COMPONENT #1.

SECTION IV RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE

TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT DATA. IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

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KAREN G. HAYNES

EQUIVA SERVICES LLC P.O. BOX 674414

HOUSTON, TX 77267-4414

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL (877) 276-7285

FOR EMERGENCY ASSISTANCE PLEASE CALL EQUIVA SERVICES LLC: (877) 276-7283 CHEMTREC: (800) 424-9300

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