

HAZARD RATING
 4=EXTREME
 3=HIGH
 2=MODERATE
 1=SLIGHT
 0=INSIGNIFICANT

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|---------------------|----------|
| HEALTH | 1 |
| FLAMMABILITY | 0 |
| REACTIVITY | 0 |

MATERIAL SAFETY DATA SHEET
VEXCON NO. FR112
VEXCON STARSEAL EF BIO-RELEASE

GENERAL INFORMATION

PRODUCT IDENTIFICATION:

STARSEAL EF BIO RELEASE

VOC CONTENT: 0 GRAMS/LITER OR 0 #/GAL.

CATEGORY: FORM RELEASE

COMMON NAME: FORM RELEASE WATER EMULSION

DOT SHIPPING NAME:

SHIPPING NAME / HAZARD CLASS / UN NUMBER / PACKING GROUP IN CONTAINERS LESS THAN AND GREATER THAN 119 GALS:

STARSEAL EF BIO RELEASE (NON-REGULATED)

FOR LIMITED QUANTITY AIR & OCEAN SHIPMENT:

STARSEAL EF BIO RELEASE (NON-REGULATED)

HEALTH AND SAFETY: USE ONLY WITH ADEQUATE VENTILATION: IF SWALLOWED, DO NOT INDUCE VOMITING. MAY BE SKIN/EYE IRRITANT. USE OF SOLVENT RESISTANT GLOVES, GOGGLES AND OTHER PROTECTIVE EQUIPMENT IS ADVISED WHEN HANDLING THIS PRODUCT.

SECTION I

MANUFACTURER: VEXCON CHEMICALS, INC.
ADDRESS: 7240 STATE RD., PHILA., PA 19135 USA
EMERGENCY NO: 1-800-858-2828
TELEPHONE NO: 1-215-332-7709 (Vexcon)
CHEMTREC NO: 1-800-424-9300
PREPARED: FEBRUARY 1997
UPDATED: DECEMBER 2010
PREPARED BY: DARRYL F. MANUEL, PRESIDENT

SECTION II HAZARDOUS INGREDIENTS

NO HAZARDOUS INGREDIENTS

| MATERIAL OR COMPONENTS | % | HAZARD DATA | UN NUMBER |
|----------------------------------|------------|----------------------------------|-----------|
| WATER EMULSION OF RELEASE AGENTS | TOTAL 100% | NO TLVs OR HAZARDOUS INGREDIENTS | NONE |
| WATER | 94-98% | NONE | NONE |
| RELEASE AGENTS | <5% | NONE | NONE |

SECTION III PHYSICAL / CHEMICAL CHARACTERISTICS

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| BOILING POINT: (760mmHg) 100°C / 212°F (WATER) | MELTING/FREEZING POINT: 0°C / 32°F (WATER) |
| VAPOR PRESSURE: 17.5 mmHg @ 68°F/20°C (WATER) | VAPOR DENSITY (AIR=1): = WATER |
| SOLUBILITY IN H2O % BY WT: SOLUBLE | % VOLATILES BY VOL: 94-98% |
| EVAPORATION RATE (BuAc=1): SLOW 0.3 (WATER) | SPECIFIC GRAVITY (H2O=1) 1.0 =WATER |
| pH (AS IS): 7.5 – 8.0 | pH (1% SOLN): N/A |
| APPEARANCE AND ODOR: | CLEAR LIQUID WITH NO ODOR |

SECTION IV FIRE AND EXPLOSION DATA

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| FLASH POINT: (TEST METHOD) | NONE (WATER) |
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| AUTOIGNITION TEMP: | NONE (WATER) |
| FLAMMABLE LIMITS IN AIR, % BY VOL: | NONE (WATER) |
| EXTINGUISHING MEDIA: | FIRES INVOLVING THIS PRODUCT MAY BE CONTROLLED BY REGULAR FOAM, CARBON DIOXIDE, DRY CHEMICALS OR WATER SPRAY. WATER MAY BE USED TO REDUCE THE RATE OF BURNING AND FOR COOLING PURPOSES |
| GENERAL HAZARD: | "EMPTY" CONTAINERS RETAIN PRODUCT RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER, OR PROPERLY DISPOSED OF. |
| UNUSUAL FIRE AND EXPLOSION HAZARD: | VAPORS MAY FORM EXPLOSIVE MIXTURES WITH AIR. IF STORAGE CONTAINERS ARE EXPOSED TO EXCESSIVE HEAT, OVER PRESSURIZATION OF THE CONTAINERS CAN RESULT. |
| SPECIAL FIRE FIGHTING PROCEDURES | THE USE OF SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE SHOULD BE PROVIDED FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS WHERE THIS PRODUCT IS STORED. STORAGE CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH WATER SPRAY IN ORDER TO PREVENT PRESSURE BUILD UP. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. |

SECTION V REACTIVITY DATA

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| CONDITIONS CONTRIBUTING TO INSTABILITY: | THIS PRODUCT IS STABLE. |
| INCOMPATIBILITY: | THIS PRODUCT IS INCOMPATIBLE WITH STRONG OXIDIZING AGENTS, STRONG ACIDS OR BASES, AND SELECTED AMINES. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE, AND UNIDENTIFIED ORGANICS. |
| CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: | N/A WILL NOT OCCUR |

SECTION VI HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA HAZARD CLASSIFICATION BASIS FOR CLASSIFICATION SOURCE

ROUTES OF EXPOSURE:

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| INHALATION: | THIS PRODUCT MAY CREATE BREATHING DIFFICULTIES, DIZZINESS, LIGHTEADEDNESS, HEADACHES WHEN WORKING IN AREAS WITH HIGH VAPOR CONCENTRATION. |
| SKIN CONTACT: | THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. |
| SKIN ABSORPTION: | THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. |
| EYE CONTACT: | THIS PRODUCT MAY BE AN EYE IRRITANT. |

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| INGESTION / INHALATION | SMALL AMOUNTS OF LIQUID ASPIRATED INTO THE RESPIRATORY SYSTEM DURING INGESTION, OR FROM VOMITING, MAY CAUSE BRONCHOPNEUMONIA OR PULMONARY EDEMA. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION. |
| EFFECTS OF OVEREXPOSURE: | ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. LIQUIDS MODERATELY IRRITATING ON SKIN AND EYES. |
| ACUTE OVEREXPOSURE: | ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS: MODERATE IRRITATION BY LIQUID TO SKIN AND EYES. PROLONGED CONTACT ON THE SKIN WILL CLAY AND DEFAT THE SKIN POSSIBLY CAUSING DERMATITIS. |
| EMERGENCY AND FIRST AID PROCEDURES: | |
| EYES: | FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK IMMEDIATE MEDICAL ATTENTION. |
| SKIN: | WASH WITH SOAP AND LARGE QUANTITIES OF WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS. |
| INHALATION: | MOVE TO LOCATION FREE FROM VAPORS. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION. |
| INGESTION: | DO NOT INDUCE VOMITING; SEEK IMMEDIATE MEDICAL ATTENTION. |

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE AND SPILL CONTROL

AQUATIC TOXICITY (E.G. 96 HR. TLM): DO NOT DISCHARGE THIS PRODUCT INTO PUBLIC WATERS OR WATERWAYS UNLESS AUTHORIZED BY A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA).

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: ELIMINATE SOURCES OF IGNITION (FLARES, FLAMES, PILOT LIGHTS, ELECTRICAL SPARKS). PREVENT ADDITIONAL DISCHARGE OF MATERIAL; IF POSSIBLE TO DO SO WITHOUT HAZARD. FOR SMALL SPILLS, IMPLEMENT CLEANUP PROCEDURES. FOR LARGE SPILL, IMPLEMENT CLEAN UP PROCEDURES AND, IF IN PUBLIC AREA, KEEP PUBLIC AWAY AND ADVISE AUTHORITIES. DIKE SPILL AREA WITH SAND OR EARTH TO CONTAIN SPILLED LIQUID AND PREVENT SPREADING. DO NOT USE COMBUSTIBLE MATERIALS SUCH AS SAWDUST. PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID CAN BE TAKEN UP ON SAND, EARTH, FLOOR ABSORBENT, OR WITH ANOTHER SUITABLE ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY TO EPA, FEDERAL, STATE, AND LOCAL DISPOSAL REGULATIONS.

WASTE DISPOSAL METHOD: IF POSSIBLE, PUMP TO CONTROLLED CONTAINMENT AREA. ABSORB ON CLAY OR SAND. DISPOSE OF IN COMPLIANCE WITH EPA, FEDERAL, STATE, AND LOCAL REGULATIONS. TREATMENT TRANSPORTATION AND DISPOSAL MUST BE IN COMPLIANCE WITH EPA FEDERAL, STATE, AND LOCAL REGULATIONS UNDER THE RESOURCES CONSERVATION AND RECOVERY ACT (RCRA, 40 CFR 261). TYPICALLY CONTROLLED BURNING, INCINERATION OR APPROVED LAND FILL SITES ARE AVAILABLE.

SECTION VIII CONTROL MEASURES

VENTILATION REQUIREMENTS: LOCAL MECHANICAL VENTILATION MAY BE SUFFICIENT TO KEEP PRODUCT VAPOR CONCENTRATIONS WITHIN SPECIFIED TIME-WEIGHTED TLV RANGES. IF LOCAL VENTILATION PROVES INADEQUATE TO MAINTAIN SAFE VAPOR CONCENTRATIONS, SUPPLEMENTAL LOCAL EXHAUST MAY BE REQUIRED. OTHER SPECIAL PRECAUTIONS SUCH AS RESPIRATORY MASKS OR ENVIRONMENTAL CONTAINMENT DEVICES MAY BE REQUIRED IN EXTREME CASES.

RESPIRATORY (SPECIFY IN DETAIL): THE USE OF RESPIRATORY PROTECTION DEPENDS ON VAPOR CONCENTRATION ABOVE THE TIME WEIGHTED TLV: USE OF OSHA APPROVED CARTRIDGE RESPIRATOR OR GAS MASK OR AIR-PACK. CHEMICAL CARTRIDGE RESPIRATOR: HALF MASK ORGANIC VAPOR CARTRIDGE. FULL FACE ORGANIC VAPOR CARTRIDGE IF EYE PROTECTION IS NEEDED.

EYES: CHEMICAL GOGGLES AND/OR FACE SHIELD ARE RECOMMENDED TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY.

GLOVES: THE USE OF IMPERMEABLE GLOVES IS ADVISED TO PREVENT SKIN IRRITATION IN SENSITIVE INDIVIDUALS. IMPERVIOUS GLOVES, (CHEMICAL RESISTANT) SUCH AS NEOPRENE, LATEX OR PVA.

OTHER CLOTHING AND EQUIPMENT: TO PREVENT BODY CONTACT, IMPERVIOUS CLOTHING AND BOOTS ARE RECOMMENDED. IMPERVIOUS APRONS AND HELMETS (HEAD COVER) ARE RECOMMENDED WHEN WORKING WITH THIS PRODUCT. THE AVAILABILITY OF EYE WASHES AND SAFETY SHOWERS IN WORK AREAS IS RECOMMENDED.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS: PERSONNEL SHOULD AVOID INHALATION OF VAPORS. PERSONAL CONTACT WITH THE PRODUCT SHOULD BE AVOIDED. SHOULD CONTACT BE MADE, REMOVE SATURATED APPAREL AND FLUSH AFFECTED BODY AREAS WITH WATER. CLOTHING MUST BE WASHED AND DRIED BEFORE REUSE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE (VAPOR, LIQUID AND/OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

FIRE FIGHTING: WATER MAY BE HELPFUL IN KEEPING ADJACENT CONTAINERS COOL. PERSONNEL SHOULD AVOID INHALATION OF VAPORS.

OTHER HANDLING AND STORAGE REQUIREMENTS: STORE AND USE IN WELL VENTILATED AREA, EQUIVALENT TO FRESH AIR. KEEP CONTAINER TIGHTLY CLOSED. DO NOT STORE WITH INCOMPATIBLE MATERIALS. STORE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. DO NOT STORE OR CONSUME FOOD, DRINK, OR TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL. KEEP AWAY FROM HIGH TEMPERATURES, OPEN FLAMES, SPARKS, SOURCES OF IGNITION, ETC. USE WITH EXPLOSION PROOF EQUIPMENT IS HIGHLY ADVISABLE.

HMIS HAZARD RATINGS:

THIS INFORMATION IS FOR PEOPLE TRAINED IN:
NATIONAL PAINT AND COATINGS ASSOCIATIONS (NPCA)
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704)
IDENTIFICATION OF FIRE HAZARDS OF MATERIALS

| VEXCON STARSEAL EF BIO RELEASE | NPCA-HMIS | NFPA 704 | KEY |
|---------------------------------------|------------------|-----------------|------------|
| HEALTH | 1 | 1 | 4=SEVERE |
| FLAMMABILITY | 0 | 0 | 3=SERIOUS |
| REACTIVITY | 0 | 0 | 2=MODERATE |
| | | | 1=SLIGHT |
| | | | 0=MINIMAL |

SECTION X REGULATORY INFORMATION

TSCA: THE SOLVENT PORTION OF THIS PRODUCT IS LISTED ON THE TSCA INVENTORY AS A UVCB (UNKNOWN, VARIABLE COMPOSITION OR BIOLOGICAL) CHEMICAL AT CAS REGISTRY NUMBER 64742-95-6.

CERCLA: IF THE REPORTABLE QUANTITY OF THIS PRODUCT IS ACCIDENTALLY SPILLED, THE INCIDENT IS SUBJECT TO THE PROVISIONS OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) AND MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER BY CALLING 1-800-424-8802 or 202-426-2675.

NO REPORTABLE SPILL QUANTITY (RQ) HAS BEEN ESTABLISHED FOR THIS PRODUCT.

SARA TITLE III: UNDER THE PROVISIONS OF TITLE III, SECTIONS 311/312 OF THE SUPERFUND AMENDMENTS AND RE-AUTHORIZATION ACT, THIS PRODUCT IS CLASSIFIED INTO THE FOLLOWING HAZARD CATEGORIES: DELAYED HEALTH, FIRE

ADDITIONAL REGULATORY CONCERNS: (FEDERAL, FDA, USDA, CPSC, STATE, OTHER)

FEDERAL:

FDA:

USDA:

CERCLA / RQ: **NONE**

TSCA: IS THIS PRODUCT, OR ALL ITS INGREDIENTS, BEING CERTIFIED FOR INCLUSION ON THE TOXIC SUBSTANCES CONTROL ACT INVENTORY OF CHEMICAL SUBSTANCES? YES

PREPARED BY: DARRYL MANUEL / PRESIDENT
COMPANY: VEXCON CHEMICALS, INC.
ADDRESS: 7240 STATE RD., PHILA., PA 19135 USA

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