

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

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0



SAFETY DATA SHEET
 VEXCON NO. AB106
STARSEAL TRIPLE SET NC

SECTION I - GENERAL INFORMATION

PRODUCT IDENTIFICATION: STARSEAL TRIPLE SET NC	
VOC CONTENT:	ZERO GRAMS/LITER OR 0 #/GAL
CATEGORY:	NOT REQUIRED
COMMON NAME:	LIQUID CALCIUM NITRATE SOLUTION
MANUFACTURER:	VEXCON CHEMICALS, INC
ADDRESS	7240 STATE RD, PHILADELPHIA, PA 19135
EMERGENCY NO:	800.858.2828 (PolySat Inc)
TELEPHONE NO:	215.332.7709 (Vexcon)
CHEMTREC NO:	800.424.9300 (CCN# 23822)
PREPARED:	MARCH 1996
UPDATED:	OCTOBER 2019
PREPARED BY:	DARRY F. MANUEL , PRESIDENT

SECTION II - HAZARD IDENTIFICATION

<p>CLASSIFICATION OF MIXTURE ACUTE ORAL TOXICITY - CATEGORY 4 SKIN IRRITATION - CATEGORY 3 EYE IRRITATION - CATEGORY 2A</p> <p>SINGLE WORD: WARNING</p> <p>HAZARD STATEMENT: THIS PRODUCT MY BE HARMFUL OR FATAL IF SWALLOWED. THIS PRODUCT IS IRRITATION TO THE EYES, RESPIRATORY SYSTEM AND SKIN. THIS PRODUCT IS AN AQUEOUS SOLUTION WHICH WILL NOT BURN. HOWEVER, IF EVAPORATED TO DRYNESS THIS PRODUCT IS AN OXIDIZER AND CAN SUSTAIN COMBUSTION. IRRITATING AND TOXIC FUMES AND GASSES MAY BE RELEASED UPON THERMAL PROCESSING OR DURING COMBUSTION.</p> <p>PRECAUTIONARY STATEMENT: CONTACT WITH EYES CAN CAUSE MODERATE IRRITATION. THIS PRODUCT IS IRRITATION TO THE SKIN. THIS PRODUCT MAY BE HARMFUL OR FATAL IS SWALLOWED. THIS PRODUCT IS IRRITATION TO THE RESPIRATORY SYSTEM. WEAR PROTECTIVE GLOVES, PROTECTIVE CLOTHING, EYE PROTECTION, FACE PROTECTION. SEEK MEDICAL ATTENTION IF ANY SYSTEMS PERSIST.</p>
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SECTION II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENTS	CAS NO.	%	HAZARD DATA
CALCIUM NITRATE	10124-37-5	30-40%	ORAL: LD50 3900 mg/Kg SKIN: 500 mg/24hrs MODERATE EYE: 500 mg/24H SEVERE
ADDITIVES	31138-65-5	1-5%	NON-HAZARDOUS
WATER	7732-18-5	60-70%	NON-HAZARDOUS

SECTION IV FIRST AID MEASURES

HEALTH HAZARD DATA HAZARD CLASSIFICATION
 BASIS FOR CLASSIFICATION SOURCE

ROUTES OF EXPOSURE:	
INHALATION:	NO THRESHOLD LIMIT VALUES HAVE BEEN ESTABLISHED FOR THIS CALCIUM NITRATE SOLUTION. PROLONGED INHALATION OF VAPORS MAY CAUSE IRRITATION OF RESPIRATORY TRACT MUCOUS MEMBRANES.
SKIN CONTACT:	FULL EFFECTS NOT DEFINED
SKIN ABSORPTION:	FULL EFFECT NOT DEFINED. WILL CAUSE SEVERE IRRITATION UPON CONTINUED CONTACT.
EYE CONTACT:	FULL EFFECT NOT DEFINED. CAN CAUSE SEVERE IRRITATION IF NOT TREATED
INGESTION / INHALATION	FULL EFFECT NOT DEFINED. LARGE ORAL DOSE CAN BE FATAL. IRRITATION TO MUCOUS MEMBRANES OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH.
ACUTE OVEREXPOSURE:	LARGE ORAL DOSE CAN BE FATAL. DUSTS AND MISTS ARE IRRITATING TO MUCOUS MEMBRANES OF THE RESPIRATORY TRACT, MOUTH, THROAT, ESOPHAGUS AND STOMACH. IRRITATING TO EYE AND SKIN. THE CHRONIC LOCAL EFFECT MAY CONSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR PRIMARY IRRITANT IN VARYING DEGREES TO RESPIRATORY TRACT TISSUES
CHRONIC OVEREXPOSURE:	DIZZINESS, ABDOMINAL CRAMPS,VOMITING, DIARRHEA, WEAKNESS AND COLLAPSE. CHRONIC, SMALL REPEAT DOSAGES CAN CAUSE WEAKNESS,DEPRESSION, HEADACHE AND MENTAL IMPAIRMENT.
EMERGENCY AND FIRST AID PROCEDURES:	
EYES:	FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
SKIN:	WASH WITH SOAP AND LARGE QUANTITIES OF WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS.
INHALATION:	MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION.
INGESTION:	IF CONSCIOUS, IMMEDIATELY GIVE 2-4 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF THROAT. SEEK MEDICAL ATTENTION FOR IRRITATION, INGESTION OR DISCOMFORT FROM INHALATION.

SECTION V FIREFIGHTING MEASURES

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. AVOID SPRAYING WATER DIRECTLY INTO STORAGE CONTAINERS DUE TO DANGER OF BOIL OVER.
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:	EXPOSURE TO HEAT OR FLAME CAN CAUSE EMISSION OF HAZARDOUS NITROGEN FUMES
SPECIAL FIRE FIGHTING PROCEDURES	WATER SOLUTION, NON-FLAMMABLE. DRY SOLIDS WILL SUPPORT COMBUSTION.

SECTION VI ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:	PREVENT ADDITIONAL DISCHARGE OF MATERIAL; IF POSSIBLE TO DO SO WITHOUT HAZARD. NEUTRALIZE WITH LIME. FLUSH WITH WATER TO CHEMICAL SAFE AREA. 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. 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. DO NOT ALLOW DRIED OR SPILLED MATERIAL TO REMAIN NEAR FLAMMABLE SUBSTANCES.
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SECTION VII HANDLING AND STORAGE

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 UNSUITABLE AS AN EXTINGUISHING MEDIUM BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. 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 FROM FREEZING. STORE AT TEMPERATURES ABOVE 32°F / 0°C.

SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

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 PHYSICAL / CHEMICAL CHARACTERISTICS

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: 100%	% VOLATILES BY VOL: 60-70%
EVAPORATION RATE (BuAc=1): SLOW 0.3 (WATER)	SPECIFIC GRAVITY (H2O=1) 1.33
pH (AS IS): 5-6 TYPICAL	pH (1% SOLN): 6-7 TYPICAL
APPEARANCE AND ODOR:	COLORLESS CLEAR LIQUID, BASICALLY ODOR FREE
FLASH POINT: (TEST METHOD)	NONE (WATER)
AUTOIGNITION TEMP:	NONE (WATER)
FLAMMABLE LIMITS IN AIR, % BY VOL:	NONE (WATER)

SECTION X STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY:	THIS PRODUCT IS STABLE.
INCOMPATIBILITY:	THIS PRODUCT IS INCOMPATIBLE WITH STRONG ACIDS, HIGH HEAT, POWDERED METALS, AMMONIA, HYDRAZINE, REDUCING AGENTS, AND EASILY OXIDIZABLE MATERIALS; CAUSES EXOTHERMIC REACTION
HAZARDOUS DECOMPOSITION PRODUCTS:	EXPOSURE TO HEAT OR FLAME CAN CAUSE EMISSION OF HAZARDOUS NITROGEN FUMES AND/OR NITRIC OXIDES
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:	N/A WILL NOT OCCUR

SECTION XI TOXICOLOGICAL INFORMATION

ACUTE AND CHRONIC TOXICITY		
GENERAL PRODUCT INFORMATION		NO INFORMATION AVAILABLE FOR THE PRODUCT. THE NITRATE COMPONENT OF THIS PRODUCT MAY CAUSE METHEMOGLOBINEMIA UPON INGESTION CHARACTERIZED BY CYANOSIS, HEADACHE, DIZZINESS, FATIGUE, NAUSEA, BOMITING, DROWSINESS, STUPOR, COMA AND RARELY DEATH.
COMPONENT ANALYSIS – LD50/LC50		
CALCIUM NITRATE TETRAHYDRATE (133477-34-4)		ORAL LD50 – RAT – 3900 mg/kg
CARCINOGENICITY		
GENERAL PRODUCT INFORMATION		NO CARCINOGENICITY DATA AVAILABLE FOR THIS PRODUCT.
COMPONENT CARCINOGENICITY		NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED BY ACGIH, IARC, OSHA, NIOSH, OR NTP.
CHRONIC TOXICITY		NO INFORMATION AVAILABLE FOR THE PRODUCT
EPIDEMIOLOGY		NO EPIDEMIOLOGICAL DATA IS AVAILABLE FOR THE PRODUCT
NEUROTOXICITY		NO DATA AVAILABLE FOR THIS PRODUCT
MUTAGENICITY		NO DATA AVAILABLE FOR THIS PRODUCT
TERATOGENICITY		NO DATA AVAILABLE FOR THIS PRODUCT
OTHER TOXICOLOGICAL INFORMATION		NO ADDITIONAL INFORMATION AVAILABLE

SECTION XII ECOLOGICAL INFORMATION

GENERAL PRODUCT INFORMATION	IN HIGH CONCENTRATIONS, THIS PRODUCT MAY BE HARMFUL TO BOTH TERRESTRIAL AN AQUATIC PLANT OR ANIMAL LIFE.
COMPONENT ANALYSIS – ECOTOXICITY – AQUATIC TOXICITY	NO ECOTOXICITY DATA ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.
ENVIRONMENTAL FATE	NO DATA AVAILABLE FOR THIS PRODUCT

SECTION XIII DISPOSAL CONSIDERATIONS

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).
WASTE DISPOSAL METHOD: NEUTRALIZE WITH LIME. FLUSH WITH WATER TO CHEMICAL SAFE AREA. 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 XIV TRANSPORTATION INFORMATION

Governing Body	Mode	UN Number	Proper Shipping Name	Hazard Class	Packing Group
DOT	GROUND	NON-REGULATED	NON REGULATED	NON REGULATED	NA
IATA	AIR	NON-REGULATED	NON REGULATED	NON REGULATED	NA
IMDG	OCEAN	NON-REGULATED	NON REGULATED	NON REGULATED	NA
MARINE POLLUTANT:		THIS PRODUCT DOES NOT CONTAIN A MATERIAL ON THE MARINE POLLUTANTS TABLE (HMT 172.101 APPENDIX B)			

SECTION XV REGULATORY INFORMATION

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: ACUTE HEALTH

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

FEDERAL:
 FDA:
 USDA:

CERCLA / RQ: NONE ESTABLISHED

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

SECTION XVI OTHER INFORMATION

PREPARED BY:	DARRYL MANUEL / PRESIDENT
COMPANY:	VEXCON CHEMICALS, INC.
ADDRESS:	7240 STATE RD., PHILA., PA 19135 USA
THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE. VEXCON PROVIDES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN.	

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			KEY 4 -- SEVERE
STARSEAL TRIPLE SET NC	NPCA-HMIS	NFPA 704	3 -- SERIOUS
HEALTH	1	1	2 -- MODERATE
FLAMMABILITY	1	1	1 -- SLIGHT
REACTIVITY	0	0	0 -- MINIMAL