Product ID:ISOPROPYL ALCOHOL

MSDS Date:04/17/2000

FSC:6810

NIIN:00-753-4993 Status Code:A

MSDS Number: CKVYP === Responsible Party ===

Company Name:PHOENIX INDUSTRIES INC Address:1519 CHAMBERLAYNE PARKWAY

City:RICHMOND

State:VA ZIP:23222 Country:US

Info Phone Num:804-264-5183

Emergency Phone Num:804-264-5183 Chemtrec Ind/Phone:(800)424-9300

CAGE:0YED2 === Contrac

tor Identification ===

Company Name: PHOENIX INDUSTRIES INC Address: 1519 CHAMBERLAYNE PARKWAY

Box:City:RICHMOND

State:VA ZIP:23222 Country:US

Phone:804-264-5183/FAX: 264-5535 Contract Num:SP0450-01-M-D115

CAGE:0YED2

======= Composition/Information on Ingredients ========

Ingred Name: ISOPROPYL ALCOHOL

CAS:67-63-0

RTECS #:NT8050000 Minumum % Wt:90. Maxumum % Wt:100.

OSHA PEL:980 MG/M3;400 PPM ACGIH TLV:983 MG/M3;400 PPM ACGIH STEL:1230 MG/M3;500 PPM

Ingred Name:WATER

CAS:7732-18-5

R

TECS #:ZC0110000 Minumum % Wt:0. Maxumum % Wt:10.

========= Hazards Identification ===============

LD50 LC50 Mixture:LD50 ORAL RAT =5045 MG/KG

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Health Hazards Acute and Chronic:INHALATION: INHALATION OF VAPORS IRRITATES THE RESPIRATORY TRACT. INGESTION: CAN CAUSE DROWSINESS, UNCONSCIOUSNESS & DEATH. GASTROINTESTINAL PAIN, CRAMPS, NAUSEA, VOMITING & DIARRHEA MAY ALSO RESULT. THE SINGLE LETHAL DOSE FOR A

- HUMAN ADULT=ABOUT 250 MLS (8 OUNCES). SKIN: MAY CAUSE IRRITATION. MAY BE ABSORBED THROUGH THE SKIN WITH POSSIBLE SYSTEMIC EFFECTS. EYE: VAPORS CAUSE EYE IRRITATION. SPLAS HES CAUSE SEVERE IRRITATION, POSSIBLE CORNEAL BURNS & EYE DAMAGE. CHRONIC: SKIN EFFECTS.
- Effects of Overexposure:INHALATION: IRRITATION OF RESPIRATORY TRACT.
 EXPOSURE TO HIGH CONCENTRATIONS HAS A NARCOTIC EFFECT, PRODUCING SYMPTOMS OF DIZZINESS, DROWSINESS, HEADACHE, STAGGERING, UNCONSCIOUSNESS &
- POSSIBLY DEATH . INGESTION: CAN CAUSE DROWSINESS, UNCONSCIOUSNESS & DEATH. GASTROINTESTINAL PAIN, CRAMPS, NAUSEA, VOMITING & DIARRHEA MAY ALSO RESULT. SKIN: MAY CAUSE IRRITATION WITH REDNESS & PAIN. MAY BE ABSORBED THROUGH THE SKIN WITH POSSIBLE SYSTEMIC EFFECTS. EYE: VAPORS CAUSE EYE IRRITATION. SPLASHES CAUSE SEVERE IRRITATION, POSSIBLE CORNEAL BURNS & EYE DAMAGE.
- Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN DISORDERS OR IMPAIRED LIVER, KIDNEY, OR PULMONARY FUNCTION MAY BE
 MORE SUSCEPTIBLE TO THE EFFECTS OF THIS AGENT.

First Aid:INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN. INGESTION: GIVE LARGE AMOUNTS OF WATER TO DRINK. NEVER GIVE AN YTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION. SKIN: IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR A

LEAST 15 MINUTES. CALL A PHYSICIAN IF IRRITATION DEVELOPS. EYE: IMMEDIATELY FL USH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

============ Fire Fighting Measures =========================

Flash Point Method:CC Flash Point:=12.C, 53.6F

Autoignition Temp:=399.C, 750.2F

Lower Limits:2.0 Upper Limits:12.7

Extinguishing Media:WATER SPRAY, DRY CHEMICAL, ALCOHOL FOAM, OR CARBON DIOXIDE.

Fire Fighting

Procedures:WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL, DILUTE SPILLS TO NONFLAMMABLE MIXTURES, PROTECT PERSONNEL ATTEMPTING TO STOP LEAK & DISPERSE VAPORS.IN THE EVENT OF A FIRE, WEAR FULL PROT ECTIVE CLOTHING & NIOSH-APPROVED SCBA W/FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

Unusual Fire/Explosion Hazard:ABOVE FLASH POINT, VAPOR-AIR MIXTURES ARE EXPLOSIVE WITHIN FLAMMABLE LIMITS NOTED. CONTACT WITH STRONG OXIDI

ZERS MAY CAUSE FIRE OR EXPLOSION. VAPORS CAN FLOW ALONG SURFACE TO DISTANT IGNITION SOURCES AND FLASH BACK. SENSITIVE TO STATIC DISCHARGE.

======== Accidental Release Measures ===========

Spill Release Procedures: VENTILATE AREA OF LEAK OR SPILL. REMOVE ALL SOURCES OF IGNITION. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. ISOLATE HAZARD AREA. CONTAIN & RECOVER LIQUID WHEN POSSIBLE. USE NON-SPARKING TOOLS & E QUIPMENT. COLLECT LIQUID IN AN APPROPRIA

TE CONTAINER OR ABSORB WITH AN INERT MATERIAL (E.G., VERMICULITE, DRY SAND, EARTH), AND PLACE IN A CHEMICAL WASTE CONTAINER.

Neutralizing Agent:USE WATER SPRAY TO DISPERSE THE VAPORS AND TO FLUSH SPILLS AWAY FROM EXPOSURES.

=========== Handling and Storage ==============

Handling and Storage Precautions:PROTECT AGAINST PHYSICAL DAMAGE. STORE IN A COOL, DRY WELL-VENTILATED LOCATION, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE. OUTSIDE OR DETACHE

D STORAGE IS

PREFERRED. SEPARATE FROM INCOMPATI BLES. CONTAINERS SHOULD BE BONDED & GROUNDED FOR TRANSFERS TO AVOID STATIC SPARKS.

Other Precautions:USE NON-SPARKING TOOLS, INCLUDING EXPOSION PROOF VENTILATION. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (VAPORS, LIQUID); OBSERVE ALL WARNINGS AND PREC AUTIONS LISTED FOR THE PRODUCT.

====== Exposure Controls/Personal Protection ========

Respiratory Protection: PERSO

NAL RESPIRATORS (NIOSH APPROVED): IF THE

EXPOSURE LIMIT IS EXCEEDED, A FULL FACEPIECE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE MAY BE WORN. FOR EMERGENCIES, USE A FULL-FACEPIECE POSITIVE-PRESSURE AIR-SUPPLIED RESPIRATOR.

Ventilation: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORN EXPOSURE LIMITS.

Protective Gloves:WEAR IMPERVIOUS GLOVES.

Eye Protection: CHEMICAL SAFETY GOGGLES &/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSI

BLE

Other Protective Equipment:WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, LAB COAT, APRON OR COVERALLS AS APPROPRIATE TO PREVENT SKIN CONTACT. NEOPRENE & NITRILE RUBBER ARE RECOMMENDED MATERIALS. MAINTAIN EYE WASH

Supplemental Safety and Health

LOCAL EXHAUST VENTILATIN IS GENERALLY PREFERED BECAUSE IT CAN CONTROLL THE EMISSIONS OF THE CONTAINMENT AT ITS SOURCE. CONSULT ACGIH MANUAL ON INDUSTRIAL VENTILATION.

| ======================================= | Physical/Chemical Properties | ===== |
|---|------------------------------|-------|
| | | |

HCC:F2

Boiling Pt:=82.C, 179.6F

Melt/Freeze Pt:=-89.C, -128.2F

Vapor Pres:44@25C (77F)

Vapor Density:2.1

Spec Gravity:0.79@20C/4C

pH:NO INFORMATION

Evaporation Rate & Evaporation R

Solubility in Water:MISCIBLE IN WATER

Appearance and Odor:CLEAR, COLORLESS LIQUID; RUBBING ALCOHOL ODOR.

Percent Volatiles by Volume:100

======== Stability and Reactivity Data =========

Stability Indicator/Materials to Avoid:YES STRONG OXIDIZERS, ACETALDEHYDE, ACIDS,

CHLORINE, ETHYLENE OXIDE, HYDROGEN-PALLADIUM COMBINATION, HYDROGEN PEROXIDE-SULFURIC ACID COMBINATION, POTASSIUM TERT-BUTOXIDE, HYPOCHLOROUS ACID, ISOCYANATES, NITROFORM, PHOSGENE, ALU Stability Condition to Avoid: HEAT AND SUNLGHT CAN CONTRIBUTE TO INSTABILITY. Hazardous Decomposition Products: CARBON DIOXIDE AND CARBON MONOXIDE MAY FORM WHEN HEATED TO DECOMPOSITION. Conditions to Avoid Polymerization: WILL NOT OCCUR. ======= Toxicological Information ======== Toxicological Information: SKIN RABBIT LD50: 12.8 GM/KG; INHALATION RAT LC50: 16,000 PPM/ 8 HR; INVESTIGATE AS A TUMORIGEN, REPRODUCTIVE EFFECTOR. NTP= NO, IARC = 3 (NOT CLASSIFIABLE AS CARCINOGEN). ========= Ecological Information =============== Ecological: WHEN RELAEASE INTO THE SOIL, THIS MATERIAL IS EXPECTED TO QUICKLY EVAPORATE, BIODGRADE TO A MODERATE EXTENT, AND MAY LEACH INTO GROUNDWATER. WHEN RELEASED INTO WATER, THIS MATERIAL IS **EXPEC** TED TO QUIC KLY EVAPORATE AND READILY BIODEGRADE, & IS EXPECTED TO AHAVE AHALF LIFE OF BETWEE, 1 7 10 DAYS. IT DOES NOT SIGNIFICANTLY BIOACCUMULATES. WHEN RELEASED INTO AIR THIS MATEIAL IS EXPECTED TO READILY DEG RADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS, AND HAS A HALF LIFE OF 1 TO 10 DAYS IN AIR. IT CAN BE REMOVED FROM ATMOSPHERE TO A MODERATE EXTENT BY WET DEPOSITION. ======= Disposal Considerations ============================= Waste

Disposal Methods:WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE & SENT TO A RCRA APPROVED INCINERATOR OR DISPOSED IN A RCRA APPROVED WASTE FACILLITY. PROCESSING, USE OR CONTAMI NATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. DISPOSAL MUST IN ACCORDANCE WITH, LO CAL, STATE AND FEDERAL REGULATIONS.

======== MSDS Transport Information ============

Transport Information: PSN: ISOPROPANOL, 3, UN1219, I

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| SARA Title III Information:SARA SECTION 302 RQ & TPQ: NO SARA SECTION 313 (40CFR372.65): CHEMICAL CATG=NO, LIST= YES. RCRA/CERCLA = NO. TSCA (261.33)= NO, TSCA 8(D)= NO. ENVIRONMENTAL TOXICITY: THE LC50/96 HR VALUES FO R FISH ANE OVER 100 MG/L. THIS MATERIAL IS NOT EXPECTED TO BE TOXC TO AQUATIC LIFE. |
| ========== Other Information ============ |
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his information by the compiling agencies):
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