

PHOENIX INDUSTRIES INC -- NITRIC ACID, TECHNICAL -- 6810-00-236-5670

===== Product Identification =====

Product ID:NITRIC ACID, TECHNICAL

MSDS Date:04/08/1999

FSC:6810

NIIN:00-236-5670

Status Code:A

MSDS Number: CKFXB

=== Responsible Party ===

Company Name:PHOENIX INDUSTRIES INC

Address:11028 S LEADBETTER RD UNIT 10

City:ASHLAND

State:VA

ZIP:23005

Country:US

Info Phone Num:804-264-5183

Emergency

Phone Num:804-264-5183

Chemtrec Ind/Phone:(800)424-9300

CAGE:0YED2

=== Contractor 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:SPO450-00-M-D935

CAGE:0YED2

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

Ingred Name:NITRIC ACID

CAS:7697-37-2

RTECS #:QU5775000

Minumum % Wt:65.

Maxumum % Wt:70.

OSHA PEL:5 MG/M3;2 PPM

ACGIH TLV:5.2 MG/M3;2 P

PM
ACGIH STEL:10 MG/M3;4 PPM
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Minumum % Wt:30.
Maxumum % Wt:35.

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

LD50 LC50 Mixture:INHALATION, RAT LC50: 67 PPM
Health Hazards Acute and Chronic:INHALATION: CORROSIVE! INHALATION OF VAPORS CAN CAUSE BREATHING DIFFICULTIES & LEAD TO PNEUMONIA & PULMONARY EDEMA, WHICH MAY BE FATAL. INGESTION: CORROSIVE! SWALLOWING NITRIC ACID CAN CAUSE IMMEDIA TE PAIN & BURNS OF THE MOUTH, THROAT, ESOPHAGUS & GASTROINTESTINAL TRACT. SKIN: CORROSIVE! CAN CAUSE REDNESS, PAIN, AND SEVERE SKIN BURNS. CONCENTRATED SOLUTIONS CAUSE DEEP ULCERS AND STAIN. EYES: C ORROSIVE! VAPORS ARE IRRITATING & MAY CAUSE SEVERE DAMAGE TO EYES. SPLASHES MAY CAUSE SEVERE BURNS & PERMANENT EYE DAMAGE. CHRONIC: LONG-TERM EXPOSURE TO CONCENTRATED VAPORS MAY CAUSE EROSION OF TEETH & LUNG DAMAGE.

Effects of Overexposure:INHALATION: COUGHING, CHOKING, AND IRRITATION OF THE NOSE, THROAT, AND RESPIRATORY TRACT. SYMPTOMS MAY DISAPPEAR ONLY TO RETURN IN A FEW HOURS & MORE SEVERELY. ONSET OF SYMPTOMS MAY BE DELAYED FOR 4-3 0 HOURS. SKIN: REDNESS, PAIN, SEVERE BURNS. EYES: SEVERE BURNS, PERMANENT EYE DAMAGE. INGESTION: PAIN, BURNS TO MOUTH, THROAT, ESOPHAGUS & GI TRACT.

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN DISORDERS, EYE DISEASE, OR CARDIOPULMONARY DISEASE MAY BE MORE SU SCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.

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===== First Aid Measures =====

First Aid:INHALATION:REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. INGESTION: DO NOT INDUCE VOMITING! GIVE LARGE QUANTITIES OF WATER OR MILK IF AVA ILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 M

MINUTES WHILE REMOVING

CONTAMINATED CLOTHING & SHOES. WASH CLOTHING BEFORE REUSE.
THOROUGHLY CLEAN SHOES BEFORE REUSE. EYE CONTACT: IMMEDIATELY FLUSH
EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LIDS
OCCASIONALLY. GET MEDICAL ATTENTION.

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

Extinguishing Media: WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED
CONTAINERS COOL. DO NOT GET WATER INSIDE CONTAINER.

Fire Fighting Procedures: IN THE EVENT OF
A FIRE, WEAR FULL PROTECTIVE

CLOTHING & NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH
FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE
PRESSURE MODE.

Unusual Fire/Explosion Hazard: REACTS EXPLOSIVELY WITH COMBUSTIBLE
ORGANIC OR READILY OXIDIZABLE MATERIALS SUCH AS: ALCOHOLS,
TURPENTINE, CHARCOAL, ORGANIC REFUSE, METAL POWDER, HYDROGEN
SULFIDE, ETC. REACTS WITH MOST METALS TO RELEASE HYDROGEN GAS
WHICH CAN FORM EXPLOSIVE MIXTURES WITH AIR.

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

Spill Release Procedures: VENTILATE AREA OF LEAK OR SPILL. WEAR
APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. KEEP UNNECESSARY &
UNPROTECTED PERSONNEL FROM ENTERING. CONTAIN & RECOVER LIQUID WHEN
POSSIBLE. NEUTRALIZE WITH ALKALINE MATERIAL THEN ABSORB WITH AN
INERT MATERIAL & PLACE IN A CHEMICAL WASTE CONTAINER. DO NOT USE
COMBUSTIBLE MATERIALS, SUCH AS SAW DUST. DO NOT FLUSH TO SEWER.

Neutralizing Agent: SODA
ASH, LIME.

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

Handling and Storage Precautions: STORE IN A COOL, DRY, VENTILATED
STORAGE AREA WITH ACID RESISTANT FLOORS & GOOD DRAINAGE. PROTECT
FROM PHYSICAL DAMAGE. KEEP OUT OF DIRECT SUNLIGHT & AWAY FROM HEAT,
WATER & INCOMPATIBLE MATERIALS. DO NOT WASH OUT CONTAINER & USE IT
FOR OTHER PURPOSES.

Other Precautions: WHEN DILUTING, THE ACID SHOULD ALWAYS BE ADDED SLOWLY
TO WATER & IN SMALL AMOUNTS. NEVER USE HO

T WATER & NEVER ADD WATER
TO THE ACID. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN
EMPTY SINCE THEY RETAIN PRODUCT RESIDUES. OBSERVE ALL WARNINGS &
PRECAUTIONS.

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

Respiratory Protection:NIOSH APPROVED:WEAR A SUPPLIED AIR,
FULL-FACEPIECE RESPIRATOR, AIRLINED HOOD, OR FULL-FACEPIECE
SELF-CONTAINED BREATHING APPARATUS. NITRIC ACID IS AN OXIDIZER AND
SHOULD NOT COME IN CONTACT WITH CARTRIDGES AND CANI

STERS THAT

CONTAIN OXIDIZABLE MATERIALS, SUCH AS ACTIVATED CHARCOAL.
CANISTER-TYPE RESPIRATORS USING SORBENTS ARE INEFFECTIVE.

Ventilation:LOCAL/GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE
EXPOSURE BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST
VENTILATION IS PREFERRED GENERALLY PREFERRED.

Protective Gloves:WEAR IMPERVIOUS GLOVES.

Eye Protection:CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE
SPLASHING IS POSSIBLE.

Other Protective Equipment:WEAR IMPERVIOUS PRO
TECTIVE CLOTHING,

INCLUDING BOOTS, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE TO
PREVENT SKIN CONTACT. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH
FACILITIES IN WORK AREA.

Supplemental Safety and Health

===== Physical/Chemical Properties =====

HCC:C1

Boiling Pt:=122.C, 251.6F

Melt/Freeze Pt:=-42.C, -43.6F

Vapor Pres:48 @20C

Spec Gravity:1.41

pH:1.0 (0.1M SOLUT

Solubility in Water:INFINATELY SOLUBLE.

Appearance and Odor:COLORLESS TO YELLOWISH LIQUID. SU
FFOCATING ODOR.

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

Stability Indicator/Materials to Avoid:YES

A DANGEROUSLY POWERFUL OXIDIZING AGENT, FUMING NITRIC ACID IS
INCOMPATIBLE WITH MOST SUBSTANCES, ESPECIALLY STRONG BASES,
METALLIC POWDERS, CARBIDES, HYDROGEN SULFIDE, TURPENTINE, AND
COMBUSTIBLE ORGANICS.

Stability Condition to Avoid:LIGHT AND HEAT. STABLE UNDER ORDINARY
CONDITIONS OF USE AND STORAGE. CONTAINERS MAY BURST WHEN HEATED.

Hazardous Decompo

sition Products:WHEN HEATED TO DECOMPOSITION, EMITS TOXIC NITROGEN OXIDES FUMES AND HYDROGEN NITRATE. WILL REACT WITH WATER OR STEAM TO PRODUCE HEAT AND TOXIC AND CORROSIVE FUMES.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:FOR NITRIC ACID: ORAL, HUMAN LDLO: 430 MG/KG. INHALATION, RAT LC50: 67 PPM (NO2)/4H. INVESTIGATED AS A MUTAGEN & REPRODUCTIVE EFFECTOR.

===== Ecological Information =====

Ecological:ENVIRONEMNTAL FATE: NO INFORMATION FOUND. ENVIRONMENTAL TOXICITY: NO INFORMATION FOUND.

===== Disposal Considerations =====

Waste Disposal Methods:WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE & APPROVED WASTE FACILITY. STATE & LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOS E OF CONTAINER & UNUSED CONTENTS IN AC CORDANCE WITH FEDERAL, STATE & LOCAL REQUIREMENTS.

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

Transport Information:DOMESTIC, LAND, DOT: PROPER SHIPPING NAME: NITRIC ACID (WITH NOT MORE THAN 70% NITRIC ACID). HAZARD CLASS: 8. UN: UN2031. PACKING GROUP: II. AIR, I.C.A.O., PROPER SHIPPING NAME: NITRIC ACID. HAZARD CL ASS: 8. UN: UN2031. PACKING GROUP: I.

===== Regulatory Information =====

SARA Title III Information:SECTION 302: RQ/TPQ=1000 LBS. SECTION 313: LISTED-YES; CHEMICAL CATEGORY-NO. SECTIONS 311/312: ACUTE-YES; CHRONIC-YES; FIRE-YES; PRESSURE-NO; REACTIVITY-YES.
Federal Regulatory Information:LISTED ON TSCA CHEMICAL INVENTORY. CERCLA: 1000 LBS. RCRA 261.33: NO; TSCA 8 (D): NO. CHEMICAL WEAPONS CONVENTION: NO. TSCA 12 (B): NO. CDTA: NO.

===== Other Information =====

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