

PURITAN PRODUCTS INC -- NITRIC ACID 50 - 70% -- 6810-00-236-5670

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

Product ID:NITRIC ACID 50 - 70%  
MSDS Date:01/04/1999  
FSC:6810  
NIIN:00-236-5670  
Status Code:A  
MSDS Number: CJLLX  
=== Responsible Party ===  
Company Name:PURITAN PRODUCTS INC  
Address:2290 AVENUE A  
City:BETHLEHEM  
State:PA  
ZIP:18017  
Country:US  
Info Phone Num:610-866-4225  
Emergency Phone Num:610-866-4225  
Chemtrec Ind/Phone:(800)424-9300  
CAGE:0TG10  
=== Contractor Identification ===  
Company Name:PURITAN PRODUCTS INC  
Address:2290 AVENUE A  
Box:City:BETHLEHEM  
State:PA  
ZIP:18017  
Country:US  
Phone:610-866-4225  
Contract Num:SP0450-99-M-NA25  
CAGE:0TG10

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

Ingred Name:NITRIC ACID  
CAS:7697-37-2  
RTECS #:QU5775000  
Minumum % Wt:65.  
Maxumum % Wt:70.  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5 MG/M3;2 PPM  
OSHA STEL:4 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.  
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:INHALATION RAT LC50: 244 PPM (NO2)/30M  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:TARGET ORGANS: N/P. EYES, SKIN,  
RESPIRATORY SYSTEM, TEETH (NIOSH). ACUTE - POISON! DANGER! S  
TRONG

OXIDIZER, CORROSIVE!. INHALATION OF VAPORS CAN RESULT IN BREATHING  
DIFFICULTIES AND LEAD TO PNEUMONIA AND PULMONARY EDEMA, WHICH MAY  
BE FATAL. VAPORS ARE IRRITATING AND MAY CAUSE DAMAGE TO EYES. MAY  
CAUSE SEVERE BURNS AND PERMANENT EYE DAMAGE. CAN CAUSE SEVERE SKIN  
BURNS, DEEP ULCERS AND STAIN SKIN A YELLOW OR YELLOW-BROWN COLOR.  
SWALLOWING NITRIC ACID CAN CAUSE IMMEDIATE PAIN AND BURNS OF THE  
MOUTH, THROAT, ESOPHAGUS AND GASTROINTESTINAL TRACT. CHRONIC -

VAPORS MAY CAUSE EROSION OF TEETH AND LU NG DAMAGE.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:BREATHING DIFFICULTIES, IRRITATING TO EYES,  
SEVERE EYE BURNS AND PERMANENT EYE DAMAGE, SEVERE SKIN BURNS, DEEP  
ULCERS AND YELLOW OR YELLOW-BROWN COLOR STAIN, IMMEDIATE PAIN AND  
BURNS OF THE MOUTH, THR OAT, ESOPHAGUS AND GASTROINTESTINAL TRACT,  
EROSION OF TEETH

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN  
DISORDERS, EYE DISEASE, OR CARDIOPULMONA  
RY DISEASES MAY BE MORE  
SUSCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.

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

First Aid:INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE  
ARTIFIVIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.  
CALL PHYSICIAN. EYE CONTACT: IMMEDIATELY FLUSH EYES WITH PLENTY OF  
WATER FOR AT LEAST15 MINUTES, LIFTING LOWER AND UPPER EYELIDS  
OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY. SKIN CONTACT:  
IMMEDIATELY

FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IMMEDIATELY. INGESTION: DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER OR MILK IF AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

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

Flash Point:NONE

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

Fire Fighting Procedures:WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

Unusual Fire/Explosion Hazard:NOT COMBUSTIBLE, BUT SUBSTANCE IS A STRONG OXIDIZER. 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.

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

Spill Release Procedures:VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. ISOLATE HAZARD AREA. KEEP UNPROTECTED PERSONNEL AWAY. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE. NEUTRALIZE WITH SODA ASH OR LIME. THEN ABSORB WITH VERMICULITE, DRY SAND, OR EARTH, AND PLACE IN A CHEMICAL WASTE

CONTAINER. DO NOT USE COMBUSTIBLE MATERIALS. DO NOT FLUSH TO SEWER. REPORT IF SPILL > RQ TO NRC 800-424-8802.

Neutralizing Agent:SODA ASH, LIME

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

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

CONTAINER AND USE IT FOR

OTHER PURPOSES. NEVER USE HOT WATER AND NEVER ADD WATER TO ACID

Other Precautions:WATER ADDED TO ACID CAN CAUSE UNCONTROLLED BOILING AND SPLASHING. WHEN DILUTING, ACID SHOULD ALWAYS BE ADDED TO WATER AND IN SMALL AMOUNTS. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (VAPORS, LIQUID); OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

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

Respiratory Protection:IF THE EXPOSURE LIMIT IS EXCEEDED, 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 CANISTERS THAT CONTAIN OXIDIZABLE MATERIALS SUCH AS ACTIVATED CHARCOAL. CANISTER-TYPE RESPIRATORS USING SORBENTS ARE INEFFECTIVE.

Ventilation:A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE

EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST IS PREFERRED.

Protective Gloves:IMPERVIOUS

Eye Protection:CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD

Other Protective Equipment:MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA. WEAR IMPERVIOUS PROTECTIE CLOTHING. INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS AS APPROPRIATE, TO PREVENT SKIN CONTACT.

Work Hygienic Practices:N/P. OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMEND

ED PROCEDURES. WASH AFTER HANDLING AND BEFORE EATING, DRINKING OR SMOKING (HMIS).

Supplemental Safety and Health

NOT COMBUSTIBLE, BUT SUBSTANCE IS A STRONG OXIDIZER AND ITS HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE IGNITION. CAN REACT WITH METALS TO RELEASE FLAMMABLE HYDROGEN GAS.

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

HCC:C1

Boiling Pt:=122.2C, 252.F

Melt/Freeze Pt:=-42.2C, -44.F

Vapor Pres:48 @ 20C

Vapor Density:2-3

Spec Gravity

:1.41  
pH:1.0  
Evaporation Rate & Reference:NO INFO FOUND  
Solubility in Water:INFINITELY SOLUBLE  
Appearance and Odor:COLORLESS TO YELLOWISH LIQUID, SUFFOCATING, ACRID  
ODOR.  
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES  
A DANGEROUS POWERFUL OXIDIZING AGENT, CONCENTRATED NITRIC ACID IS  
INCOMPATIBLE WITH MOST SUBSTANCES. ESPECIALLY STRONG BASES,  
METALLIC POWDERS, CARBIDES, HYDROGEN SULFIDE, TURPENTINE AND  
COMBUSTIBLE ORGANICS.  
Stability Condition to Avoid:CONTAINERS MAY BURST WHEN HEATED.  
Hazardous Decomposition 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:ORAL (HUMAN) LD<sub>50</sub>: 430 MG/KG.

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

Ecological:NO INFORMATION FOUND.

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

Waste Disposal Methods:WASTE CANNOT BE SAVED FOR RECOVERY OR  
RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE  
FACILITY. ALTHOUGH NOT A LISTED RCRA HAZARDOUS WASTE, THIS MATERIAL  
MAY EXHIBIT ONE OR MORE CHARACTERISTICS OF A HAZARDOUS WASTE.  
STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL  
REGULATIONS.

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

SARA Title III Information:NITRIC ACID: CERCLA RQ: 1000 LBS; TPQ: 1000  
LBS; LISTED ON SARA 313. SECTION 311/312: ACUTE: YES, CHRONIC: YES,  
FIRE: YES.  
Federal Regulatory Information:THIS PRODUCT IS LISTED ON THE TOXIC  
SUBSTANCE CONTROL ACT (TSCA) INVENTORY OF CHEMICAL SUBSTANCES.

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

Disclaimer (provided with this information by t

he compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.