

Material Safety Data Sheet

PLATINUM TEST SOLUTION

February 23, 2011

SECTION - 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

U-Testit, LLC
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EMERGENCY TELEPHONE NUMBER

INFOTRAC (800) 535-5053

SECTION - 2 COMPOSITION INFORMATION

<u>COMPONENT</u>	<u>CAS #</u>	<u>PERCENT</u>
Nitric Acid	7697-37-2	40 to 60%
Hydrochloric Acid	7647-01-0	2 to 8%

SECTION - 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

POISON! DANGER! STRONG OXIDIZER. Contact with other material may cause fire.

CORROSIVE! Liquid and mist cause severe burns to all body tissue. May be fatal if swallowed or inhaled. Inhalation may cause lung damage. Repeated or prolonged exposure to the substance can produce target organs damage.

POTENTIAL ACUTE HEALTH EFFECTS

Eye Contact: Corrosive! Vapors are irritating and may cause damage to the eyes.

Skin Contact: Corrosive! Can cause redness, pain, and severe skin burns.

Inhalation: Corrosive! Vapor is extremely hazardous. Inhalation of vapors can cause breathing difficulties and can cause irritation of the mucous membranes and respiratory tract with burning pain in the nose and throat, coughing, choking, sneezing, wheezing, shortness of breath, bronchial infection and pulmonary edema. Other symptoms may include nausea, and vomiting.

Ingestion: Corrosive! Swallowing nitric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

POTENTIAL CHRONIC HEALTH EFFECTS

Eye Contact: Corrosive! Contact may cause severe burns and permanent eye damage.

Skin Contact: Corrosive! Poison! Causes skin burns and may cause deep and penetrating ulcers of the skin with a characteristic yellow to brownish discoloration. May be fatal if absorbed through skin.

Inhalation: Corrosive! Poison! May be fatal if inhaled. Vapor is extremely hazardous. Vapor may cause nitrous gas poisoning. Effects may be delayed. May cause irritation of the mucous membranes and respiratory tract with burning pain in the nose and throat, coughing, sneezing, wheezing, shortness of breath, bronchial infection and pulmonary edema. Other symptoms may include nausea, and vomiting.

Ingestion: Corrosive! Poison! May be fatal if swallowed. Causes serious gastrointestinal tract irritation or burns with nausea, vomiting, severe abdominal pain, and possible "coffee grounds" appearance in the vomit. May cause perforation of the digestive tract.

TARGET ORGANS

The substance can be toxic to lungs, mucous membranes, upper respiratory tract, skin, eyes, and teeth. May cause headache, dizziness, drowsiness, muscle contraction or spasticity, weakness, loss of coordination and may affect behavior or cause mental confusion. May affect urinary system leading to possible kidney failure.

AGGRAVATION OF PRE-EXISTING CONDITIONS

Persons with pre-existing skin disorders, eye disease, or cardiopulmonary (heart and respiratory) diseases may be more susceptible to the effects of this substance.

<u>CARCINOGENIC</u>	<u>NTP</u>	<u>ACGIH</u>	<u>IARC</u>	<u>PERCENT</u>
Nitric Acid	Not Listed	Not Listed	Not Listed	
Hydrochloric Acid	Not Listed	Not Listed	Group 3: Not classifiable for human	2 to 8%

TERATOGENIC EFFECTS

Not available.

MUTAGENIC EFFECTS

Not available.

DEVELOPMENTAL TOXICITY

Not available.

SECTION - 4 FIRST AID MEASURES

EYE CONTACT

Immediately flush eyes with cold water for at least 15 minutes while lifting upper and lower eyelids. Be sure to remove any contact lenses. Obtain immediate medical attention.

SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes while removing any contaminated clothing or shoes. Cover the irritated skin with an emollient. Obtain immediate medical attention. Wash any contaminated clothing and/or shoes before reuse.

INHALATION

Immediately remove victim to fresh air. If breathing is difficult, give oxygen if available and obtain immediate medical attention.

If not breathing, give artificial respiration. **WARNING:** It may be hazardous to the person providing artificial respiration when the inhaled material is toxic, infectious or corrosive.

INGESTION

DO NOT INDUCE VOMITING. If person is fully conscious, give one to two glasses of water or milk and obtain immediate medical attention.

SECTION – 5 FIRE FIGHTING MEASURES

FIRE

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.

EXPLOSION

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.

FIRE EXTINGUISHING MEDIA

Water spray may be used to keep fire exposed containers cool. Do not get water inside container.

SPECIAL INFORMATION

Increases the flammability of combustible, organic and readily oxidizable materials. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION – 6 ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

SECTION – 7 HANDLING AND STORAGE

Oxidizing materials should be stored in a separate safety storage cabinet or room that is cool, dry, ventilated and acid resistant. 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. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. 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.

SECTION – 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>EXPOSURE LIMITS</u>		OSHA PEL	OSHA PEL	ACGIH	ACGIH
COMPONENT	CAS #	TWA	STEL	TWA	STEL
Nitric Acid	7697-37-2	2 ppm	4 ppm	2 ppm	4 ppm
Hydrochloric Acid	7647-01-0	5 ppm	7 mg/m ³	5 ppm	8 mg/m ³

ENGINEERING CONTROLS

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

PERSONAL PROTECTION

Eyes: Wear Chemical Safety Goggles and/or Face Shield to protect eyes and face.

Skin: Sleeved Length Impervious Rubber Gloves or approved equivalent for handling and use. Wear Rubber boots, Impervious Rubber Apron or Suit when appropriate for use.

Respirator: Use a NIOSH approved/certified Full Face Vapor Respirator or a Positive Pressure Self Contained Breathing Apparatus.

SECTION – 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Light yellowish liquid.

ODOR

Suffocating, acrid.

SOLUBILITY

Infinitely soluble.

SPECIFIC GRAVITY

1.3

pH

1.0 (0.1M solution)

% VOLATILES BY VOLUME @ 21C (70F)

100 (as water and acid)

BOILING POINT

122C (252F) (as Nitric Acid)

MELTING POINT

-42C (-44F) (as Nitric Acid)

VAPOR DENSITY (AIR=1)

2-3 (as Nitric Acid)

Vapor Pressure (mm Hg)

48 @ 20C (68F) (as Nitric Acid)

SECTION – 10 STABILITY AND REACTIVITY

STABILITY

Stable under ordinary conditions of use and storage. 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. (Nitric acid, fuming)

HAZARDOUS POLYMERIZATION

Will not occur.

INCOMPATIBILITIES

Nitric Acid is a dangerously powerful oxidizing agent and is incompatible with most substances, especially strong bases, metallic powders, carbides, hydrogen sulfide, turpentine, charcoal and combustible organics.

CONDITIONS TO AVOID

Light, heat and incompatible materials.

SECTION – 11 TOXICOLOGICAL INFORMATION

<u>TOXICITY</u>				RESULT	EXPOSURE
COMPONENT	FORM	SUBJECT		VALUE	TIME
Nitric Acid	LC50	Inhaled	Rat	217 ppm	4 Hr
Hydrochloric Acid	LD50	Oral	Rat	900 mg/kg	
	LC50	Inhaled	Rat	3124 ppm	1Hr

SECTION – 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is expected to be toxic to aquatic life.

BOD5 and COD

No data available.

PRODUCTS OF BIODEGRADATION

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

TOXICITY OF THE PRODUCTS OF BIODEGRADATION

The products of degradation are less toxic than the product itself.

SECTION – 13 DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. This product would be classified as a RCRA hazardous waste and requires appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION – 14 TRANSPORT INFORMATION

D.O.T. CLASSIFICATION

UN NUMBER	UN2031	LABEL CODES	CORROSIVE, POISON, OXIDIZER
PROPER SHIPPING NAME	NITRIC ACID	REPORTABLE QUANTITY	1000 LBS
HAZARD CLASS	8	EMERGENCY RESPONSE NUMBER	157
PACKING GROUP	PG II	MARINE POLLUTANT	Yes

HMIS

Health Hazard	3
Fire Hazard	0
Reactivity	1
Personal Protection	

National Fire Protection Association

Health	4
Flammability	0
Reactivity	1
Specific hazard	Oxidizer

SECTION – 15 REGULATORY INFORMATION

<u>TSCA</u>	CAS No.	Sec 8(b) Inventory	Sec 8(d) Health & Safety	Sec 4(a) Chemical Test Rules	Sec 12(b) Export Notification
Nitric Acid	7697-37-2	Yes	Yes	Yes	Yes
Hydrochloric Acid	7647-01-0	Yes	Yes	Yes	No

<u>Reportable Quantities</u>	CAS No.	EPCRA TPQ Sec. 302	EPCRA RQ Sec. 304	CERCLA RQ Sec. 103	TRI Sec. 313	RCRA Code	RMP TQ Sec. 112r
Nitric acid	7697-37-2	1,000	1,000	1,000	Y		
Hydrochloric Acid	7647-01-0			5,000	Y		15,000

<u>SARA</u>	Sec 313	Sec 311 & 312 Hazards					Sec. 302
Chemical Name	Acute	Chronic	Flammable	Pressure	Reactive	Extremely Hazardous Substance	
Nitric acid	Yes	Yes	Yes	No	Yes	Yes	
Hydrochloric Acid	Yes	Yes	No	No	No	Yes	

<u>Right To Know</u>	CAS No.	STATE												
Chemical Name		CA	CT	FL	IL	LA	NJ	NY	PA	MI	MN	MA	RI	WI
Nitric acid	7697-37-2			Y			Y	Y	Y	Y	Y	Y	Y	Y
Hydrochloric Acid	7647-01-0	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	

CALIFORNIA **WARNING! This product contains chemicals known to the state of California to cause:**

<u>Proposition 65</u>	CAS No.	Birth Defects	Reproductive Harm	Carcinogen	Developmental
Nitric acid	7697-37-2	No	No	No	No
Hydrochloric Acid	7647-01-0	No	No	No	No

<u>Clean Air & Water Acts</u>	CAS No.	CAA HAP	Ozone Class 1	Ozone Class 2	CWA HS	PP	TP
Nitric acid	7697-37-2				Yes		
Hydrochloric Acid	7647-01-0				Yes		

INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries

Chemical Name	Australia	Canada	Europe (EINECS)	Japan	Korea	UK
Nitric Acid	Yes	Yes	Yes	Yes	Yes	Yes
Hydrochloric Acid	Yes	Yes	Yes	Yes	Yes	Yes

WHMIS Classification (CANADA)

Chemical Name	DSL	CLASS	DEFINITION
Nitric Acid	Yes	D-1A	Material causing immediate and serious toxic effects (VERY TOXIC).
Hydrochloric Acid	Yes	D-2A	Material causing other toxic effects (VERY TOXIC).
		E	Corrosive Liquid

DSCL (EEC)	CODE	DEFINITION
Nitric Acid	R8	Contact with combustible material may cause fire.
	R35	Causes severe burns.
Hydrochloric Acid	R37	Irritating to respiratory system
	S23	Do not breathe gas/fumes/vapor/spray
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S36	Wear suitable protective clothing.
	S45	In case of accident or if you feel unwell, seek medical advice immediately.

SECTION – 16 OTHER INFORMATION

Source Information	Chemical	Cas No.	Revision Date
Mallinckrodt Baker, Inc.	Nitric Acid	7697-37-2	2/15/2008
Science Laboratory	Nitric Acid	7697-37-2	11/6/2008
CEPP	Nitric Acid	7697-37-2	3/5/2009
OSHA	Nitric Acid	7697-37-2	3/5/2009
EMD Chemicals Inc	Nitric Acid	7697-37-2	3/27/2003
Science Laboratory	Hydrochloric Acid	7647-01-0	10/9/2005

Disclaimer

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