MATERIAL SAFETY DATA SHEET

In compliance with EC Directive 2001/58/EC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product Name: PASSIVATION LIQUID
Product Code #: 833024 (30 lt)

Product Uses: Industrial applications; Cleaning agent for stainless steel surface areas and equipment.

Date last modified: 19 November 2017

Company:
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Emergency Information:
Inside U.S. and Canada: (800)-424-9300 (CHEMTREC)
Outside U.S. and Canada: 1-703-527-3887 (CHEMTREC)
National Emergency Centre (Greece): ++30 210 7793777

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Corrosive. Causes severe burns.

Colorless and odorless liquid.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Composition:

Ingredients	CAS Number	Proportion	Classification*
Nitric Acid	7697-37-2	5% - 25%	C; R35
Components which do not contribute to the classification of the product	-	75% - 95 %	-

*See section 16 for the full text of the classifications and the R-phrases declared above.

Occupational Exposure Limits, if available, are listed in section 8.

4. FIRST AID MEASURES

INHALATION
Move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible.

SKIN
Immediately flush the contaminated skin with water. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water. Get medical attention promptly.

EYES
Immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Contact lenses should not be worn when working with this chemical.

INGESTION
Rinse out mouth and give plenty of water to drink. Seek immediate medical assistance.

5. FIRE-FIGHTING MEASURES

EXTINGUISH MEDIA
Non-combustible, substance itself does not burn but may decompose upon heating. Use dry chemical, CO_2 or water spray do not use alcohol-resistant foam.

FIRE FIGHTING PROCEDURES
Move containers from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks.

UNUSUAL HAZARDS
The substance decomposes on warming producing nitrogen oxides. The substance reacts violently with combustible and reducing materials, e.g., turpentines, charcoal, alcohol. The substance is an acid; it reacts with bases and is corrosive to metals.

HAZARDOUS COMBUSTION PRODUCTS
It may decompose upon heating to produce corrosive and/or toxic fumes. Contact with metals may evolve flammable hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Evacuate the area where concentrated fumes are present. Clean up personnel must wear proper protective equipment (see section 8).

ENVIRONMENTAL PRECAUTIONS
Avoid contamination of ground and surface waters. Do not flush to sewer. All spills or leaks of this material must be handled and disposed.

METHODS FOR CLEANING UP
Ensure ventilation is adequate. Shut off all sources of ignition. Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. Use absorbent (soil, sand, vermiculite or other inert material). Collect and seal in properly labeled drums for disposal.

7. HANDLING AND STORAGE

HANDLING
Do not taste or swallow material. Avoid contact with skin and avoid breathing mist. Do not eat, drink or smoke in work area. Any protective clothing or shoes, which become contaminated, should be removed immediately and thoroughly laundered before reuse.

STORAGE
Store in a cool place out of direct sunlight. Store in well ventilated area. Store separated from combustible and reducing substances, bases, food and feedstuffs, organic chemicals. Keep in a well-ventilated room.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

Name of Substance: Nitric Acid

OSHA Permissible Exposure Level (PEL):	8 hour time-weighted average 2ppm
ACGIH Threshold Limit Value (TLV):	short term exposure limit 4ppm
ACGIH Threshold Limit Value (TLV):	time-weighted average 2 ppm

PERSONAL PROTECTION

Eye and face protection: Wear chemical safety goggles, or face shield

Skin protection: Wear protective gloves & protective clothing.

Respiratory protection: Do not eat or drink in the working area, avoid breathing vapors.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
Color:	Colorless
Odor:	Characteristic odor
Boiling Point Range:	>100^{o}C
Melting Point Range:	0^{o}C
Flash Point:	Not Applicable
Autoignition Temperature:	Not Available
Lower Explosion Limit (vol %):	Not Available
Upper Explosion Limit (vol %):	Not Available
Vapour Pressure:	Not Available
Relative vapor density (air=1):	Not Available
Specific Gravity (gr/cm^3):	1.15 - 1.20 at 20^{0}C
Bulk Density (kg/m^3):	Not Available
Solubility:	Appreciable
Viscosity:	Not Available
pH Value:	0.80 – 1.20

10. STABILITY AND REACTIVITY

STABILITY
The product is stable under normal conditions.

CONDITIONS TO BE AVOIDED
Avoid heating, high temperatures and open flame. The substance decomposes on warming producing nitrogen oxides.

MATERIALS TO BE AVOIDED
Avoid reducing materials, e.g., turpentine, charcoal, alcohol. The substance is a strong acid; it reacts violently with bases and is corrosive to metals. Reacts very violently with organic chemicals (e.g., acetone, acetic acid, and acetic anhydride), causing fire and explosion hazard. Attacks some plastics

HAZARDOUS DECOMPOSITION PRODUCTS
May give off poisonous oxides of nitrogen & acid fumes when heated in fires (see section 5).

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY DATA

Name of Substance: Nitric Acid

Oral human lowest published lethal dose:	430 mg/kg
Unreported route man lowest published lethal dose:	110 mg/kg

Inhalation: May cause burning sensation, cough and laboured breathing.

Skin contact: Corrosive, it causes serious skin burns, pain and yellow discolouration.

Eye contact: May cause redness pain and severe deep burns.

Ingestion: Corrosive. It causes abdominal pain burning sensation and shock.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA

Name of Substance: Nitric Acid

Ecotoxicity Values

LC50 Shore crab 180mg/l	48 hr, Static, aerated water conditions.
LC50 Cockle 330-1000 mg/l	48 hr, Aerated water conditions.
LC50 Starfish 100-300 mg/l	48 hr, Aerated water conditions.

DEGRADATION
Avoid contaminating waterways. Product is biodegradable.

BIOACCUMULATION
No specific biodegradation test data located.

13. DISPOSAL CONSIDERATIONS

SPILLAGE DISPOSAL
Evacuate danger area! Consult an expert! Collect leaking liquid in sealable containers. Cautiously neutralize remainder with sodium carbonate. Then wash away with plenty of water. Do NOT absorb in saw-dust or other combustible absorbents (extra personal protection: complete protective clothing including self-contained breathing apparatus).

14. TRANSPORT INFORMATION

Proper shipping name: Nitric Acid, Solution

LAND TRANSPORT

UN number:	3264	RID-class:	8
ADR class:	8		

SEA TRANSPORT

UN number:	3264	EmS:	F-A, S-B
IMDG class:	8		
IMDG packing group:	III		

AIR TRANSPORT

UN number:	3264		
IATA/ICAO class:	8	Packing group:	III .

15. REGULATORY INFORMATION

LABELING ACCORDING TO EC DIRECTIVES

Symbol: C

Corrosive (C)

R-phrases: R35: Causes severe burns.

S-phrases:
- S2: Keep out of the reach of children.
- S23: Do not breathe gas/vapors.
- S24: Avoid contact with skin.
- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
- S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S38: In case of insufficient ventilation, wear suitable respiratory equipment.

16. OTHER INFORMATION

Full text of R-phrases referred in Section 3

R35: Causes severe burns.

Full text of classifications referred in Section 3

C – Corrosive.

Notice to reader

All information, instructions and statements contained in this Material Safety Data Sheet are compiled in accordance with European Directives, corresponding national legislation and on the basis of information given by our suppliers.
The information disclosed in this Material Safety Data Sheet (which supersedes all previous versions) is believed to be correct, at the date of issue, to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other products or in any processed form, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the recipient of this Material Safety Data Sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product.
Also, it is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management. Data and information provided concerning the product are informative, exclusively presented to the customer.