NITRIC ACID	ICSC: 0183

Date of Peer Review: October 2006

Concentrated Nitric Acid (70%)

CAS #	**7697-37-2**	**HNO_3**	
RTECS #	**QU5775000**	**Molecular mass: 63.0**	
UN #	**2031**		
EC Annex 1 Index #	**007-004-00-1**		
EC/EINECS #	**231-714-2**		

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE FIGHTING
FIRE	Not combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire. Heating will cause rise in pressure with risk of bursting.	NO contact with flammable substances. NO contact with combustibles or organic chemicals.	In case of fire in the surroundings: NO foam.
EXPLOSION	Risk of fire and explosion on contact with many common organic compounds.		In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Burning sensation. Cough. Laboured breathing. Shortness of breath. Sore throat. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.
Skin	Serious skin burns. Pain. Yellow discolouration.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain. Burns.	Face shield or eye protection in combination with breathing protection.	First rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.
Ingestion	Sore throat. Abdominal	Do not eat, drink, or	Do NOT induce vomiting.

	pain. Burning sensation in the throat and chest. Shock or collapse. Vomiting.	smoke during work.	Give one or two glasses of water to drink. Rest. Refer for medical attention.

SPILLAGE DISPOSAL

Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Ventilation. 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.

PACKAGING & LABELLING

Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs. Note: B

EU Classification
Symbol: O, C
R: 8-35
S: (1/2-)23-26-36-45

UN Classification
UN Hazard Class: 8
UN Subsidiary Risks: 5.1
UN Pack Group: I

GHS Classification
Danger
May be corrosive to metals
Fatal if swallowed
Causes severe skin burns and eye damage
Causes damage to respiratory tract if inhaled
Causes damage to digestive tract if swallowed
Causes damage to respiratory tract and teeth through prolonged or repeated exposure if inhaled

EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-80S2031-I NFPA Code: H 4; F 0; R 0; OX

STORAGE

Separated from combustible and reducing substances,bases, organics food and feedstuffs . Cool. Dry. Keep in a well-ventilated room.

IPCS
International Programme on Chemical Safety

SEE IMPORTANT INFORMATION ON BACK

NITRIC ACID — ICSC: 0183

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS TO YELLOW LIQUID , WITH PUNGENT ODOUR.

CHEMICAL DANGERS:
The substance decomposes on warming producing nitrogen oxides. The substance is a strong oxidant and reacts violently with combustible and reducing materials, e.g., turpentine, charcoal, alcohol. The substance is a strong acid, it reacts violently with bases and is corrosive to metals forming flammable/explosive gas (hydrogen - see ICSC0001). Reacts violently with organic compounds.

ROUTES OF EXPOSURE:
Serious local effects by all routes of exposure.

INHALATION RISK:
A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20℃.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation may cause lung oedema (see Notes). The effects may be delayed (See Notes).

OCCUPATIONAL EXPOSURE LIMITS: TLV: 2 ppm as TWA, 4 ppm as STEL; (ACGIH 2006). MAK: IIb (not established but data is available) (DFG 2008).	**EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Lungs may be affected by repeated or prolonged exposure to the vapour. The substance may have effects on the teeth , resulting in teeth erosion.

PHYSICAL PROPERTIES

Boiling point: 121℃ Melting point: -41.6℃ Relative density (water = 1): 1.4 Solubility in water: miscible Vapour pressure, kPa at 20℃: 6.4 Relative vapour density (air = 1): 2.2	Relative density of the vapour/air-mixture at 20℃ (air = 1): 1.07 Octanol/water partition coefficient as log Pow: -0.21

ENVIRONMENTAL DATA

NOTES

Depending on the degree of exposure, periodic medical examination is suggested. The symptoms of lung oedema do not become manifest until a few hours or even a few days have passed and they are aggravated by physical effort. Card has been partially updated in January 2008: see Occupational Exposure Limits.

ADDITIONAL INFORMATION