

n-PROPYL NITRATE**1513**
April 2004CAS No: 627-13-4
RTECS No: UK0350000
UN No: 1865Nitric acid, propyl ester
Monopropyl nitrate
C₃H₇NO₃
Molecular mass: 105.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Highly flammable. Explosive. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking. NO contact with oxidants, combustibles, reducing agents.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
EXPLOSION	Vapour/air mixtures are explosive. Risk of fire and explosion on contact with combustible substances.	Do NOT expose to friction or shock. Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools.	In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE			
Inhalation	Blue lips or finger nails. Blue skin. Dizziness. Headache. Nausea. Confusion. Convulsions. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention. See Notes.
Skin	Redness.	Protective gloves.	Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal pain. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Remove all ignition sources. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Personal protection: self-contained breathing apparatus.	UN Hazard Class: 3 UN Pack Group: II

EMERGENCY RESPONSE	STORAGE
NFPA Code: H2; F3; R3; OX Transport Emergency Card: TEC (R)-30GF1-I+II	Well closed. Cool. Fireproof. Separated from strong oxidants, combustible and reducing substances.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS TO YELLOW LIQUID, WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible.

Chemical dangers

Heating may cause violent combustion or explosion. May decompose explosively on shock, friction, or concussion. The substance decomposes on burning producing nitrogen oxides. The substance is a strong oxidant and reacts violently with combustible and reducing materials. Reacts violently with strong oxidants.

Occupational exposure limits

TLV: 25 ppm as TWA; 40 ppm as STEL; BEI issued; (ACGIH 2004).
MAK: 25 ppm, 110 mg/m³; Peak limitation category: II(2); (DFG 2003).

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20/C.

Effects of short-term exposure

The substance is irritating to the respiratory tract, the eyes and the skin. Inhalation of high concentrations of the substance may cause effects on the blood, resulting in the formation of methaemoglobin. The effects may be delayed. Medical observation is indicated. See Notes.

PHYSICAL PROPERTIES

Boiling point: 110/C
Relative density (water = 1): 1.05
Solubility in water: poor
Vapour pressure, kPa at 20/C: 2.4
Relative vapour density (air = 1): 3.6

Relative density of the vapour/air-mixture at 20/C (air = 1): 1.06
Flash point: 20/C c.c.
Auto-ignition temperature: 175/C
Explosive limits, vol% in air: 2-100

ENVIRONMENTAL DATA

NOTES

Combustion in a confined space may turn into detonation.
Depending on the degree of exposure, periodic medical examination is suggested.
Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible