

Common Name: **NITROETHANE**

Synonyms: None

CAS No: 79-24-3

 Molecular Formula: C₂H₅NO₂

RTK Substance No: 1373

Description: Colorless, oily liquid with a mild, fruity odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 3 - Fire 3 - Reactivity DOT#: UN 2842 ERG Guide #: 129 Hazard Class: 3 (Flammable)	FLAMMABLE AND REACTIVE Use dry chemical, CO ₂ , or alcohol-resistant foam extinguishing agents, as water may not be effective in fighting fires. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Nitrogen Oxides</i> . CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapors may travel to a source of ignition and flash back.	Nitroethane forms shock-sensitive compounds with STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); ALKALI METALS (such as LITHIUM, SODIUM and POTASSIUM); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); and a combination of AMINES and HEAVY METAL OXIDES. Nitroethane is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); HYDROCARBONS; and HYDROXIDES. Explosive decomposition may occur with SHOCK and HIGH TEMPERATURES, especially in confined spaces.

SPILL/LEAKS
Isolation Distance:

Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in vermiculite, dry sand, earth, or a similar material and place into sealed containers for disposal.

 Use only non-sparking tools and equipment, especially when opening and closing containers of **Nitroethane**.

 Keep **Nitroethane** out of confined spaces, such as sewers, because of the possibility of an explosion.

DO NOT wash into sewer.

PHYSICAL PROPERTIES

Odor Threshold:	2.1 ppm
Flash Point:	82°F (28°C)
LEL:	3.4%
Auto Ignition Temp:	778°F (414°C)
Vapor Density:	2.58 (air = 1)
Vapor Pressure:	15.6 mm Hg at 68°F (20°C)
Specific Gravity:	1.05 (water = 1)
Water Solubility:	Slightly soluble
Boiling Point:	237°F (114°C)
Freezing Point:	-130°F (-90°C)
Ionization Potential:	10.88 eV
Molecular Weight:	75.1

EXPOSURE LIMITS

OSHA:	100 ppm, 8-hr TWA
NIOSH:	100 ppm, 10-hr TWA
ACGIH:	100 ppm, 8-hr TWA
IDLH:	1,000 ppm

The Protective Action Criteria values are:

PAC-1 = 100 ppm	PAC-3 = 1,000 ppm
PAC-2 = 200 ppm	

PROTECTIVE EQUIPMENT

Gloves:	Butyl and Silver Shield®/4H® (>8-hr breakthrough)
Coveralls:	Tychem® BR, LV, Responder® and TK (>8-hr breakthrough for <i>Nitromethane</i>)
Respirator:	>100 ppm - SCBA

HEALTH EFFECTS

Eyes:	Irritation
Skin:	Irritation
Inhalation:	Nose, throat and lung irritation with coughing, wheezing and severe shortness of breath (pulmonary edema) Methemoglobinemia with headache, fatigue and blue color to the skin and lips

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.
Medical observation is recommended as symptoms may be delayed.