# Nitromethane

## Product Identification
- **CAS No.**: 75-52-5
- **EINECS No.**: 200-876-6
- **Formula**: CH₃NO₂
- **Mol. Wt.**: 61.04
- **HS Code**: 2904.20

## Toxicity
- Oral rat LD₅₀: 1478 mg/kg

### Synonyms
- Nitrocarbol; NM; Nitrometan (Polish); NMT; nitrometano (Spanish); Nitrométhane (French);

## Derivation

### Physical and Chemical Properties
- **Physical State**: Colourless liquid
- **Melting Point**: -29 °C
- **Boiling Point**: 100 - 103 °C
- **Specific Gravity**: 1.138
- **Solubility in Water**: Soluble
- **PH**: 6
- **Vapor Density**: 2.1
- **Autoignition**: 418 °C
- **Refractive Index**: 1.3819
- **Flash Point**: 35 °C
- **Stability**: Stable under ordinary conditions

## Applications
Nitromethane is used as a chemical intermediate in organic synthesis for explosives, medicine, pharmacy, pesticides, chemical fiber, painting and ore dressing. It's main application is as a reaction medium as well as an extraction solvent. Nitromethane is a suitable solvent in aromatic hydrocarbons separation from aliphatics as it is miscible with high proportions of aromatic hydrocarbons but is miscible with aliphatic hydrocarbons at low concentrations. Toluene can be separated by azeotropic distillation with nitromethane. It is used as a stabilizer of halogenated hydrocarbons as it inhibits the decomposition. It is used as a component of fuels to increase gaseous products formed in the combustion so that more fuel can be burned.

## Sales Specification
- **Appearance**: Colourless liquid
- **Assay**: 99.0% min
- **Acidity**: 0.1% max
- **Color, APHA**: 20 max
- **Moisture**: 0.5% max

## Transportation
- **Packing**: 225kgs in Drum
- **Haz. Class**: 3
- **UN No.**: 1261

### Other Information
Hazard Symbols: XN, Risk Phrases: 10/22/5, Safety Phrases: 41