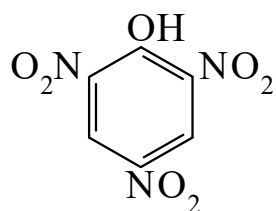




>>Entry Name: 2,4,6-Trinitrophenol, 9CI

Synonym(s): Picric acid, 8CI. Picral



CAS Registry Number: 88-89-1

Related CAS Registry Numbers(s): 573-83-1 3324-58-1 14798-26-6

Molecular Formula: C₆H₃N₃O₇

Molecular Weight: 229.106

Accurate Mass: 228.997102

Percentage Composition: C 31.46%; H 1.32%; N 18.34%; O 48.88%

Use/Importance: Used as aq. alkaline soln. for detn. of HCN, Bi, Fe, Ti, Zr. Used in explosives, textile and leather industries. Ion-pairing agent in extraction-photometric detn. of Cu, Ag, Li, K, Na using crown ethers

Physical Description: Yellow leaflets (H₂O), colourless cryst. (petrol or conc. HCl)

Melting Point: Mp 122.5°

Solubility: Mod. sol. H₂O

pKa Value: pK_a 0.33 (25°)

Other Data: Metastable forms, Mp 101° and 75°, exist. Forms cryst. addn. compds. (picrates) with many hydrocarbons and other org. compds.

Hazard & Toxicity: Explosive, forms very sensitive explosive salts with many metals. OES: long-term 0.1 mg m⁻³; short-term 0.3 mg m⁻³ (sk). Causes sensitisation dermatitis. Stains skin and hair yellow. Damages eyes by direct contact. Acute exposure causes liver and kidney injury

Aldrich: 23980-1

Fluka: 80456

Sigma: P0691

>>Derivative: Li salt

CAS Registry Number: 18390-55-1

Physical Description: Golden needles (Me₂CO/MeNO₂ or EtOH/MeNO₂ or H₂O or Me₂CO/CHCl₃/hexane)

Melting Point: Mp 301.5°

>>Derivative: Na salt

CAS Registry Number: 3324-58-1

Physical Description: Fine needles (Me₂CO/CHCl₃ or H₂O or EtOH aq.)

Melting Point: Mp 270.4°

>>Derivative: K salt

CAS Registry Number: 573-83-1

Physical Description: Brown needles (H₂O or EtOH aq.)

Melting Point: Mp 250.1°

>>Derivative: Rb salt

CAS Registry Number: 23296-29-9

Physical Description: Golden needles (H₂O)

Melting Point: Mp 233.1°

>>Derivative: Cs salt

CAS Registry Number: 3638-61-7

Physical Description: Golden needles (H₂O)

Melting Point: Mp 276.3°

>>Derivative: NH₄ salt

Synonym(s): Ammonium picrate. Picritol

CAS Registry Number: 131-74-8

Use/Importance: Explosive