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## Product Information

### FORMAMIDE Sigma Prod. No. F 7503

**CAS NUMBER:** 75-12-7

**SYNONYMS:** amid kyseliny mravenci (czech); carbamaldehyde; methanamide; methanoic acid, amide

#### PHYSICAL PROPERTIES:

Appearance: Clear colorless to very faint yellow liquid

Molecular formula: CH<sub>3</sub>NO

Formula weight: 45.04 (anhydrous)

Melting Point: +2.55°C<sup>1</sup>

Boiling Point: 210.5°C @760 mm (partial decomposition into CO and NH<sub>3</sub> at atm pressure beginning at 180°C)<sup>1</sup>

Specific Gravity: 1.13340 @20°C with respect to H<sub>2</sub>O @4°C<sup>1</sup>

Refractive Index: 1.44754 @20°C for sodium light <sup>1</sup>

Dielectric constant: 84<sup>1</sup>

#### STABILITY / STORAGE AS SUPPLIED:

Formamide may be stored at room temperature and should be protected from exposure to moisture. It will begin to partially decompose into carbon monoxide and ammonia at one atmosphere of pressure at 180°C. Industrial grades may have a faint odor of ammonia.<sup>1</sup>

#### SOLUBILITY / SOLUTION STABILITY:

Formamide is miscible with water, methanol, ethanol, acetone, acetic acid, dioxane, ethylene glycol, glycerol and phenol. It is very slightly soluble in ether and benzene. Many compounds such as tannins, starch, lignin, polyvinyl alcohol, cellulose acetate, nylon, chlorides of copper, lead, zinc, tin, cobalt, iron, aluminum, nickel and the acetates of the alkali metals will dissolve in formamide.

#### APPLICATIONS:

Formamide is used as an ionizing solvent, in the manufacture of formic esters, as a softener for paper, in animal glues and water-soluble gums.<sup>1</sup>

**FORMAMIDE**  
**Sigma Prod. No. F4761 and F7503**

**REFERENCES:**

1. *The Merck Index*, 12th ed., p. 718, #4264 (1996).

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